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Educational News and Editorial Comment

THE REPORT OF THE NATIONAL ADVISORY COMMITTEE ON EDUCATION

In May, 1929, Secretary Ray Lyman Wilbur, of the Department of the Interior, acting for President Hoover, organized a committee to formulate fundamental principles of policy which should govern the relation of the federal government to education. It was, of course, apparent from the outset that the formulation of such principles would entail a great deal of investigation and numerous conferences. Funds adequate to finance the work of the committee were provided by the Julius Rosenwald Fund. The committee consisted of fifty-two persons interested or engaged in education. In order to facilitate the great amount of necessary detailed work, a conference committee was organized within the general committee, and a special staff was organized to gather such factual information as the committee required in reaching its conclusions. During the past two years numerous conferences have been held with the various federal departments and with the representatives of national organizations interested in the problem. Thirty-nine research collaborators were appointed throughout the country, and the results of

their inquiries were available to the committee. Moreover, the committee had the benefit of such facts and suggestions as were supplied by forty-six regional and special consultants. The committee has had available for its consideration, therefore, the basic facts necessary to an understanding of the relation of the federal government to education, as well as the advice, suggestions, and criticisms of interested individuals and organizations throughout the country.

The report of the committee, which has recently been made public, is published in two parts. The first part contains the committee's findings and recommendations, and the second the basic facts which support the policies recommended. The committee has made specific recommendations and proposals for action in the seven fields in which the federal government has assumed some degree of responsibility for education: (1) the education of the people in the several states, (2) the education of persons resident on special federal areas, (3) the education of American Indians and other indigenous peoples within the national jurisdiction, (4) the education of the peoples in the territories and outlying possessions, (5) the training of persons in the service of the national government, (6) scientific research and the collection and diffusion of information regarding education, and (7) the intellectual co-operation of the United States with other nations. The report also includes a section on the type of governmental organization which the committee believes most suitable to carry into effect the policies it has recommended.

The committee is very strongly of the opinion that within recent years there has developed too great a degree of federal control over education. It presents very vigorously the point of view that education in this country should be regulated and controlled exclusively by the several states. The committee is convinced that it is a mistaken policy for the federal government to grant funds to be matched by the states and to be used for specifically designated educational enterprises. Such a policy prevents the development of a balanced educational program in the states and tends to interfere with local experimentation in education. Whatever funds it may be expedient for the federal government to appropriate to education in the states should be appropriated for general educational purposes subject entirely to state administration and control. It is strongly recommend-

ed that the federal government develop its facilities for educational research and for the dissemination of information.

The following specific proposals for action are made with respect to federal relations to education in the states.

1. *Continue special aid now in force.* For at least five years and until the results of the finance surveys recommended in Number 4 below are adequate to provide a sound plan for an equitable and economical method of federal financial assistance to the states, continue the special appropriations now in force for the purpose of aiding agricultural education and research, rural extension for adults, vocational education, and similar educational enterprises, but leave the states free to expend such monies for the specific purposes designated without the requirement for matching of monies and without federal authority to approve or reject state plans.

2. *Amend laws.* Amend those existing laws which give or tend to give the federal government and its agencies power to interfere with the autonomy of the states in matters of education. These amendments should repeal all provisions that require the states and their local communities to match federal funds or that grant power to the federal agencies to approve or reject state educational plans, to prescribe the standards controlling instruction, or otherwise to supervise and direct educational or research activities within the states.

The foregoing discussion does not relate to federal research activities in fields other than education save as these affect the autonomy of the states in the conduct of their educational affairs.

3. *Restrict legislation.* Enact no additional laws that grant federal financial aid to the states in support of special types of education or that increase existing federal grants for such special purposes as are already aided.

4. *Study finances.* In line with the study of school finance recently begun by the Office of Education, make further and continuing studies of tax systems, distribution of national income, living costs, public expenditures for eleemosynary institutions, bonded indebtedness, federal aid to states for purposes other than education, and of such other features of the situation as may be necessary to understand the total economic, political, and fiscal organization of which the school system is a part. Such facts in particular should be sought as will reveal how far and by what methods the people are justified in using the federal tax system to supplement state and local taxes in support of public education in the states in order to insure meeting fully the national responsibility for education.

Similar studies should also be made at once to answer two questions:

First: How far shall the federal government properly grant funds either to the states in support of specially designated institutions or directly to particular institutions?

Secondly: What are the right uses of the remainder of the public domain in the states for the uses of education?

5. *Aid education generally.* Make all future grants to states as grants in aid of education in general, expendable by each state for any or all educational purposes as the state itself may direct. Such grants should be made only after thorough educational and financial studies have shown to the satisfaction of the appropriating power that such federal aid is justified. Such grants should in no case be flat grants of an equal amount for each state, but should be apportioned to the states on the basis of adequate educational and financial studies. Such grants should be made for a definite and not an inconclusive period, and be subject to review at the close of every ten-year census period, when needed readjustments may be made to meet changed conditions. The only restriction placed by federal legislation on such educational grants should be the provision that every state, when it accepts the grant, agrees to make each year to the federal headquarters for education a full report on all questions on which the federal headquarters for education may require information concerning the manner in which the state has used the grant.

6. *Restrict audits.* Restrict the audits of the federal government to those made by the Treasury Department merely to determine whether or not monies granted have been spent for the general or special educational purposes as defined in the several federal acts of appropriation, without making audit an indirect method of controlling or determining educational standards and processes.

7. *Limit emergency aid.* Emergency grants made by the federal government to meet some special and transient crisis involving the use of education should be restricted to financial aid to investigate the problem, to disseminate the needed information, and to promote co-operation among all the states and local communities. A new federal agency may be created for this temporary purpose if the needs are such as to necessitate this, but financial grants to such a new agency should be made for a strictly limited period, and not renewed.

8. *Create adequate federal headquarters.* Create an adequate federal headquarters for educational research and information, so organized as to serve both as a reliable source of comprehensive, correlated, and accurate information regarding national aspects of education for all concerned in the states, territories, and outlying possessions, and as a co-operating center for all federal agencies with respect to the educational aspects of their work.

9. *Increase appropriations.* Increase the federal appropriations for educational research and information service by the Office of Education, by the Federal Board for Vocational Education, by the Extension Service and the Office of Experiment Stations in the Department of Agriculture, and by other offices or bureaus of the federal government primarily concerned with the stimulation and improvement of various types of education in the states; and provide ample facilities to these offices for supplying to all concerned the results of research and statistical studies through publications and conferences.

The following recommendations are made with respect to the further development of facilities for research.

1. *Develop the services.* Develop the federal government's research and information services with increasing emphasis on comprehensive research and on the diffusion of information that is pertinent to the decision of critical national issues.

2. *Expand in education.* Continue to expand the federal research and information service in the field of education until it meets adequately the needs of the American people for intellectual assistance in all phases of education, including the educational aspects of health, recreation, and other community activities that vitally affect physical, mental, and moral growth.

3. *Co-ordinate activities.* In the interest of efficiency, economy, and continuity of policy, organize as a subcommittee of the Interdepartmental Council for Education an interdepartmental conference on educational research and information services in education.

4. *Confer adequate status.* Give the general headquarters for education in the federal government a status and influence within the governmental organization that will permit it to present forcibly both to Congress and to the president the scientific and other professional facts which are pertinent and crucial in determining the policies of the federal government with regard to education.

The committee is of the opinion that a new type of governmental organization is necessary in order to realize the policies which it has defined. It therefore recommends that a department of education with a secretary at its head be established in the federal government, the secretary to be of equal rank with other cabinet members. The most pertinent recommendations in this connection are as follows:

Transfer the Office of Education and all pertaining thereto to the Department of Education and establish it as a major division of that department under direction of an assistant secretary of education.

Amend the Smith-Hughes Act of 1917 and all acts subsequent thereto dealing with vocational education by repealing those provisions that require state matching of federal funds and federal approval of state plans and standards and that give federal officials authority to withhold funds; abolish the Federal Board for Vocational Education, transfer its remaining functions and its staff to the Department of Education, and establish the staff as a major division of that department under direction of an assistant secretary of education. These changes relieve that staff from its present obligation to ascertain and certify to federal officials whether federally aided schools are or are not complying with the provisions of federal acts. These changes also concentrate the energies of that staff on co-operative studies and experiments designed to produce that fusion of humanistic and vocational training which is so sorely needed to promote the liberal and practical education of the American people in the several pursuits and professions in life.

Other existing federal activities, which have as their chief function educational investigation and information service and which are now operating in harmony with the policies and procedures recommended, such as the studies of physical growth of children now carried on in the Public Health Service, should also be transferred to the Department of Education.

No regulatory or executive responsibilities should be vested in the Department of Education through these transfers. Should it prove desirable to transfer to the Department of Education any federal office that now has regulatory or executive responsibilities or that has authority to withhold federal funds to secure compliance with federal acts, such powers shall be removed from that office, as in the case of the Federal Board for Vocational Education, before making the transfer. . . . .

The Department of Education as here recommended will perform those functions that were assigned to the Department of Education when established in 1867. It will collect "such statistics and facts as shall show the condition and progress of education in the several states and territories," and will diffuse "such information respecting the organization and management of schools and school systems, and methods of teaching, as shall aid the people of the United States in the establishment and maintenance of efficient school systems, and will otherwise promote the cause of education throughout the country."

The Department of Education as here recommended will have no legal or financial power and no regulatory or executive authority, direct or indirect, explicit or implied, by which it may control the social purposes and specific processes of education. This limitation of powers necessitates a complete reversal of the tendency exhibited in much recent federal legislation to build up a centralized control of the purposes and processes of education in the federal government.

FINANCIAL RETRENCHMENT AND THE DEPRESSION

The following statement regarding next year's school budget in New York was published in the *New York Sun*.

All employees of the state and of the various school boards which receive grants of state funds to supplement local educational budgets will welcome the news that no salary reductions are contemplated by the state budget-makers. Governor Roosevelt, Budget Director Mark Graves, representatives of the legislative finance committees, and the heads of state departments are now putting in full time six days a week in preparing the budget for the next fiscal year to be presented to the legislature in January.

As the state is facing a deficit of $50,000,000, reports have flooded the capital that drastic salary cuts form a major part of the state's financial program. It was learned on high authority here today that when Governor Roosevelt heard of these stories he not only expressed resentment but told his financial advisers that he has no intention of recommending salary cuts. He will insist that the balancing of the budget will have to be brought about without reducing the buying power of teachers and state employees.

New taxes will undoubtedly have to be imposed, and endeavors are being made to reduce the budget by more economical administration of state departments, but all suggestions of salary cuts have been discarded by the Governor and his cabinet members. It is understood that they not only will not stand for pay reductions but have no intention of interfering with the operation of laws calling for mandatory teacher-salary increments within existing schedules over a period of years.

At the same time strong pressure is being brought to bear by organizations of taxpayers for a big cut in the next state budget. It has given rise to many of the reports that salary reductions were being contemplated. Merwin K. Hart, of Utica, secretary of the New York State Economic Congress, called upon Governor Roosevelt last week and submitted to him a program by which he claimed a 15 per cent budget cut could be accomplished and new taxes could be avoided. His recommendations, however, included drastic salary cuts. Hart takes the position that the cost of living has reduced materially in the last few years and that public employees should accept salary decreases, the same as employees of private business. State employees declare that is an unfair argument, as they did not enjoy the same salary boosts as others during the business boom previous to the present depression.

The Board of Regents of the University of the State of New York has requested an increase in its budget for next year of approximately $6,000,000. The board gives the following reasons for its request.

School attendance, particularly high-school attendance, has greatly increased in this time of economic depression, and largely as a result of the depression. All labor unions, welfare and relief agencies, and public-spirited citizens having to deal with the unemployment problem have strongly urged parents to keep their children in school. Inability to find work has kept many children in school who would otherwise be employed, and many who in better times would be at private schools are compelled for financial reasons to attend the public schools, particularly the high schools.

In a period of economic depression such as exists throughout the world today, it is natural to expect that pressure will be brought upon school authorities to reduce their expenditures. There is, moreover, no denying the fact that the mounting cost of government in the United States constitutes an important economic problem. School people may as well admit that there is such a thing as spending too much for even such an important public service as education. No doubt most school systems by a searching examination of values can eliminate certain types of expenditures which have accumulated during days of prosperity and thus secure economy without seriously impairing the efficiency of the schools.

It is perfectly clear, however, that certain economic and social forces are playing on the American school which make it entirely impossible to reduce expenditures over any appreciable period of time. The fact is that certain social and economic changes in American life are thrusting into the schools a rapidly increasing number of pupils and forcing on the schools a constantly expanding program. The recent expansion of American education, it cannot be overemphasized, has not been brought about by forces operating within the schools themselves; external forces over which school administrators have no control are inexorably expanding the school program.

The social and economic changes referred to in the preceding paragraph are not difficult to discover. Take, for example, the changing ratio of children to adults in the total population. The declining birth-rate and the declining death-rate both operate to reduce the number of children in comparison with the number of adults. Thus, in 1850 for every 1,000 white children under sixteen years of age there were 1,118 white adults, an adult being defined as a person twenty years of age or over. In 1900 for every 1,000 children there were 1,583 adults, and in 1920 the number of adults had increased to 1,801. The data for 1930 will doubtless reveal a still greater proportionate increase of the adult population. The fact is that the work of the world is being increasingly performed by adults and that the period of schooling for children is being correspondingly prolonged.

Another fact of equal significance is that children are being excluded from industry either by operation of school-attendance and child-labor legislation or by the choice of employers. In 1915, for example, twenty-eight states required school attendance to the age of sixteen, but only one state required attendance beyond that age. At present thirty states require children to attend school until they are sixteen, five until they are seventeen, and seven until they are eighteen years of age. Under the operation of existing child-labor laws the minimum ages at which children may enter gainful occupations without any legal restrictions are as follows: sixteen years of age, twenty-one states; seventeen years, one state; eighteen years, sixteen states; and twenty-one years, nine states. Moreover, in recent

years a marked tendency is seen on the part of employers to require of their employees higher general educational qualifications.

Another aspect of the problem must be taken into account, namely, the remarkable advance of technology. The application of science and engineering to the processes of production is rapidly changing the economic structure of society. In a technological age such as this, there is little hope of success for the individual who does not possess some degree of specialized training. Work which used to require little intelligence and skill is now, for the most part, being done by machines. The American public has become very sensitive to the fact that success in life requires a higher degree of intelligence and a greater degree of skill. Thus, an added responsibility is placed on the schools, with respect to both the numbers they must accommodate and the program they must administer.

It should be pointed out, too, that technological unemployment has come to be an acute economic and educational problem. In the five-year period from 1922 to 1927, the annual increase of production of manufactured goods was 4 per cent, whereas the annual employment in factories actually decreased at the rate of 0.7 per cent. According to figures supplied by the United States Bureau of Labor Statistics, for the period 1919 to 1925, the total physical volume of production of all industries increased 28.6 per cent, whereas the total number of persons engaged in all industries decreased 8.6 per cent. Despite the increased output of the factories, the decrease in the number of factory workers between 1919 and 1929 was approximately 450,000. The educational consequences of technological unemployment are obvious. Almost overnight the problems of adult education have thrust themselves on the school.

Finally, the type of social organization which exists in this country operates to thrust into the schools an ever-increasing number of adolescents and adults. Our theory of the relation of the individual to society is such as to make it entirely impossible to pursue a restrictive educational program.

Other evidence is not lacking to show, as was said at the outset, that forces operating entirely outside the school are requiring of it a larger social program. No doubt certain economies in school ad-

ministration can be and should be accomplished, but the New York Economic Congress and others who are advocating drastic reduction in school expenditures should be made to understand the full social significance of their demands.

A SCHOOL SURVEY FOR CHICAGO

The Board of Education of Chicago has authorized a school survey at a cost of $100,000. The work of the survey is in charge of Professor George D. Strayer, director of the Institute of Educational Research of Teachers College, Columbia University. Other members of the staff have not at this writing been announced. The survey, which is to be completed by June 1, will include both educational and financial matters. Mrs. W. S. Hefferan, member of the board, is reported in the *Chicago Daily Tribune* to have made the following statement concerning its purpose and scope.

> The purpose of the survey is to ascertain just how Chicago can get the most for every dollar spent for education. The survey will include investigation of wastage in every department, business and educational, with suggestions for revision. Buildings, contracts, and school lands will be given especial scrutiny. Completed, the report is expected to form a basis for the ultimate solution of the school situation.

As might be expected, approval of the action of the board in authorizing the survey has not been unanimous. Among the objectors is Mayor Cermak. His opposition may be explained by the fact that the majority of the board initiating the proposal for a survey are hold-over members from the previous administration. He is quoted in the daily press as lacking confidence in the board and as saying, "While this new survey, costing $100,000, is being made, many of the teachers are on the verge of being compelled to ask for charity." This lack of confidence in the board appears to be shared by the *Tribune*, which published an editorial entitled "A Discredited School Board," and by the *Chicago Daily News*, which, under the caption "How Not To Spend $100,000," expressed itself editorially as follows *after* arrangements for the survey had been completed.

> Unquestionably, at the proper time, the Chicago public-school system should be subjected to a thorough survey. A complete audit has been advocated by local civic organizations competent to do the work and willing to undertake it at little, if any, cost to the school system.

The hold-over Thompson majority of the board of education, however, has shown no willingness to undergo a searching, independent investigation of its business and administrative operations, its budgets, or its methods.

Several months ago the board wasted $50,000 of taxpayers' money on a superficial survey by an outside auditing company. The report of that survey proved utterly valueless. Now the board has authorized another survey at the cost of $100,000, by an educational expert and a staff to be employed by him.

The teachers in Chicago's public schools have received no cash salaries since last April, and the board of education is pleading for relief legislation in the form of new taxes and special bond issues. In the circumstances, the present is decidedly not the time to spend $100,000 on a survey which the present board probably would put to no profitable use.

Furthermore, it is doubtful if any organization of outsiders, however competent, could survey the Chicago school system as efficiently as could a local organization familiar with all the subtle angles of the school situation. The bane of the schools has been spoils politics, with subserviency on the part of the board's majority to rapacious political bosses. Glaring waste and flagrant inefficiency would be discoverable by experienced non-resident investigators, but many of the discreditable causes of the deplorable plight of the schools easily might escape attention.

The present majority of the board of education has not cared, or has not dared, to avail itself of the services of dependable Chicago agencies in making a school survey. The board stands discredited in the eyes of the public. Its expenditure of $100,000 on an audit of the system at this time cannot be expected to create any confidence among bankers and others to whom appeals for financial help are being made.

Disregarding the issue arising out of the hold-over board, the origin of which may be nothing more than politics, we may comment briefly on the two other objections raised to the survey, its cost and the employment of an outside agency to make it. The objection to an outlay of $100,000 for the survey at a time when teachers and other school employees are unpaid is hardly worth considering, as this amount is only a fraction of a per cent of the more than seventeen millions of accumulated arrears in salaries and wages at the time of authorizing the survey and as most of the amount will not need to be paid for many months, long after some method of paying up the arrears will have been devised.

The advocacy of the employment of a local agency to make a large-scale survey of this kind is contrary to well-established tradition. Local organizations may investigate special school problems, and research bureaus of city school systems are continuously study-

ing particular problems, but comprehensive surveys of the kind proposed for Chicago are usually undertaken by outside agencies. What might be gained in special knowledge of the local situation by a local agency is much more than offset by disinterested and untrammeled inquiry by the competent outsider. Inquiry of this character is assured by engaging the services of Professor Strayer and associates. The survey is under way, will be completed, and will unquestionably bear fruit in a better knowledge of school conditions in Chicago and in their ultimate improvement.

SCHOOL BOARDS AND CITY COUNCILS

An assistant corporation counsel of the city of Chicago has drafted a bill, which, if enacted by the legislature, would give the mayor of Chicago control of the financial policies of the board of education. It is reported that the comptroller of the city favors the measure and that Mayor Cermak is giving it serious consideration. One can readily understand how the Mayor may desire to be rid of the present board of education, but, if the history of education in this city teaches any one thing conclusively, it is that the efficient administration of the schools will not be promoted by increasing the degree of control over the schools to be exercised by the mayor or the city council.

The fact is that the mayors as well as the citizens of Chicago have commonly assumed that, because the board of education is appointed by the mayor and council, it is in some way subordinated to their authority. Whatever the facts may have been, in contemplation of law the mayor and council have no control whatever over the policies of the school board. The authority to control policies does not grow out of the mere act of appointment. After school-board members are appointed, the mayor has no more authority over them than does any other citizen of the school district. Such is the case because the schools of a particular municipality are part of the state school system; they are state and not municipal institutions; their officers are state officers and not officers of the municipality. School-board members, being state officers, may be appointed in any manner the legislature may determine. They may be appointed by the courts or by the state board of education, or they may be elected by the people. It follows, therefore, that, when the mayor and council are

authorized to appoint school-board members, they in no sense represent the municipality. In the performance of this function they are merely ex officio state officers. Once the appointment is made, the authority of the mayor and council is at an end.

The whole problem of the relation of school boards to municipal government needs to be given serious consideration. The problem is complex and not easy of solution. At the threshold one is met by the fact that boards of education in this country have control of the spending of enormous sums of money. That fact alone is enough to account for the tendency of municipal officers to seek to extend their control over the schools. A more serious consideration, however, is the tendency in public administration in this country to centralize administrative control in a particular geographical area in the hands of a central administrative organization. The elimination of numerous governmental bodies, it is argued, will result in economy and efficiency of administration. Granted that centralization of control may be necessary for purposes of economy, the question still remains whether the schools should be placed under municipal control or whether centralization should take place within the state school system. In this connection one important fact cannot be overlooked: in American jurisprudence perhaps no principle is more firmly established than the principle which declares that schools are state and not municipal institutions. Thus, it has been repeatedly held that a city, in the absence of specific statutory authority, cannot spend its funds for the maintenance of public schools; boards of education, inasmuch as school property is state property, cannot be required to obey the building ordinances of municipalities; and, finally, under no circumstances will municipal officers be permitted to exercise any greater degree of control over school finance than that clearly intended by the legislature.

School people generally have a genuine fear of increased municipal control over the administration of the schools. This fear has grown out of experience. In the long run, it may, however, avail them little. If a satisfactory solution of the problem is to be reached, school administrators in this country must arrive at a comprehensive understanding of the structure of American political institutions and, what is more, at an understanding of the place which the school occupies in our type of political organization.

EDUCATION OF EXCEPTIONAL CHILDREN

One of the volumes to be published by the White House Conference on Child Health and Protection will appear in the near future under the title *Special Education—The Handicapped and the Gifted.* The chapters included in the book will be "The Crippled," "The Blind and the Partially Seeing," "The Deaf and Hard of Hearing," "The Defective in Speech," "Lowered Vitality," "Mentally Retarded Children," "Behavior Problem Children," "The Gifted," "Training of Teachers," and "Organization, Administration and Supervision."

No doubt the facts reported in this volume will do much to stimulate the rather recent movement to provide the handicapped child with educational facilities comparable to those enjoyed by his more fortunate brother. Certainly some of the facts constitute a challenge which the public-school authorities of this country cannot ignore. For example, of the 14,400 blind children under twenty years of age, only 5,000 are being educated in state, private, or public day schools and classes. There are 50,000 partially-seeing children who should be in sight-saving classes, but less than 5,000 of them are enrolled in such classes. The hearing of approximately 3,000,000 children is impaired in varying degrees; 18,212 deaf children are enrolled in schools and classes for the deaf. At least 1,000,000 school children between the ages of five and eighteen are so defective in speech that they require remedial treatment and training; of these, only 60,000 are at present receiving the necessary care. Of the 300,000 crippled children in the country, approximately 100,000 need special education; 10,110 of these are enrolled in public schools and 1,480 in state hospitals and schools and in private schools. Children who are victims of tuberculosis number 382,000, and 850,000 others are suspicious cases. Approximately 1,000,000 children have weak or damaged hearts, and, of these, 375,000 have serious organic heart disease. The undernourished children, however, constitute by far the largest number among the handicapped, it being estimated that approximately 6,000,000 school children are malnourished. Moreover, it is estimated that about 3 per cent of the children enrolled in the elementary schools might be termed "gifted" children. Obviously, the report of the White House Conference will serve to bring into focus

some of the major problems growing out of the education of the exceptional child.

MORE CONCERNING "WHAT SIZE CLASS?"

The following communication has been received from L. J. Hauser, superintendent of schools, Riverside, Illinois.

The article on "What Size Class?" by E. E. Keener in the October issue of the *Elementary School Journal* raises some very interesting and important questions. However, it seems that one of the most important phases of the whole subject was overlooked.

With regard to the findings of the experiments on class size, Keener points out that "their importance lies in the fact that the weight of evidence tends to show that the work done by pupils in large classes is as good as, or better than, the work done by pupils in small classes." It is the real meaning of the words "work done" that causes the great amount of misinterpretation of the findings of these studies. The more correct statement would be to state that there is little or no difference in the results as measured by the particular tests used in the experiments. The important point to be kept in mind is the fact that the things measured are the amounts of knowledge and facts that the children are capable of remembering. That the acquisition of facts is a legitimate and worthwhile aim of education no one will deny. However, the assumption that this is the only or the primary objective of education is the cause of the overemphasis which has been given the results of these experiments.

In the evaluation of the results of these experiments on class size, there are many important questions which must be answered before the conclusion stated by Keener can be accepted. What provision can be made, in the development of self-expression and self-confidence, to replace the constant opportunity for the child to express himself before his class group which the small class affords? How much opportunity will there be for the child to receive the valuable training that comes from requiring him to defend his point before his classmates? Will it be possible to provide effectively for every child during an activity period? How much opportunity will there be for each child to receive the rich vicarious experience which dramatization makes possible? Will it be possible to give the child that sympathetic understanding which means so much to him? How much opportunity will there be for that close contact which is so essential for the development of important character traits?

Until the answers to these and other similar questions have been definitely established, the results of the experimental studies on class size will have little practical value to those who believe in progressive education. Until it has been proved that class size makes no difference in the vital outcomes of education, it would seem a dangerous practice to disregard the valuable experience of the past and the judgment of the progressive teachers who are making daily contacts with the children.

A FELLOWSHIP FOR RESEARCH IN EDUCATION

Pi Lambda Theta, an honorary fraternity for women in education, makes the following announcement.

For the year 1931–32, Pi Lambda Theta offers a fellowship to a woman who wishes to devote herself to research in education. This fellowship is to be known as the Ella Victoria Dobbs Fellowship of Pi Lambda Theta. It carries a stipend of $1,000, $900 of which will be paid in two equal amounts. One hundred dollars will be due when the final obligations have been met.

The candidate for this research fellowship shall have at least the degree of Master of Arts from a graduate school of recognized worth. In addition she shall have shown notable skill in teaching and significant accomplishment in research, and she shall have definite plans for further research.

The acceptance of the fellowship implies the obligation on the part of the scholar to devote herself unreservedly to study or research as outlined in her application; to submit any proposed change in her plan to the chairman for approval; and to send to the chairman at least two reports of her work, the first, not later than January 15, giving a statement of her work which will satisfy the committee that she is pursuing the research indicated in her application. The second report shall be made upon the completion of her year's work. This latter report shall be in printed form as previously agreed upon with the committee.

The committee regards the acceptance of the fellowship as creating a contract requiring the fulfilment of these conditions.

Each applicant should submit: (*a*) a record of her formal education, (*b*) a record of her professional activities, (*c*) evidence of previous research, (*d*) a physician's statement concerning her health, and (*e*) a list of the persons whom she has asked to write directly to the secretary in support of her application. Among those asked to write shall be two women who will send to the committee a careful, confidential judgment of the personality of the applicant.

Theses, papers, and letters submitted by the applicants will be returned if postage is sent for the purpose. Confidential letters sent to the committee will not be returned.

A personal meeting with a member of the committee will be of great advantage.

Applications must be made on a blank form which will be supplied on request by the secretary of the Committee on Award, Maude McBroom, State University of Iowa, Iowa City, Iowa. This blank must be filled out and submitted with all supporting papers and letters not later than January 1, 1932. All material and inquiries should come to the secretary and not to the chairman or other members of the committee.

HISTORY IN THE INTERMEDIATE GRADES

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In order to discover some of the recent trends and tendencies in the teaching of history in the intermediate grades, the writer recently examined fifty-seven courses of study in history for Grades IV, V, and VI. Each of the courses was designated by one of the following titles: "Course of Study in History," "Course of Study in Social Science," or "Outline for the Social Studies."

Two factors were considered in making a choice of courses to be examined: (1) recency of publication and (2) representative geographical distribution throughout the country. All the courses examined were published some time during the period 1928–31, and all sections of the United States are represented in the geographical distribution of the courses. The name of each city and the date each course of study was published are as follows:

Akron, Ohio, 1930; Ann Arbor, Michigan, 1929; Anniston, Alabama, 1930-31; Asbury Park, New Jersey, 1930; Bakersfield, California, 1929; Baltimore, Maryland, 1930; Beaver Falls, Pennsylvania, 1929–30; Bellefontaine, Ohio, 1930–31; Bessemer, Alabama, 1928–29; Biloxi, Mississippi, 1928–29; Birmingham, Alabama, 1930–31; Brookline, Massachusetts, 1930; Charleston, West Virginia, 1930–31; Chicopee, Massachusetts, 1929; Cleveland Heights, Ohio, 1930; Clinton, Iowa, 1929; Coshocton, Ohio, 1931; Dallas, Texas, 1928; Dixon, Illinois, 1930; Duquoin, Illinois, 1929; El Paso, Texas, 1930; Fort Morgan, Colorado, 1929; Haddonfield, New Jersey, 1928; Hampton, Iowa, 1930–31; Hannibal, Missouri, 1929; Houston, Texas, 1928–29; Inglewood, California, 1930–31; Joplin, Missouri, 1930; Kansas City, Missouri, 1930; Kent, Ohio, 1930; Kenosha, Wisconsin, 1928; Lakewood, Ohio, 1929; Monroe, North Carolina, 1928–29; Morgantown, West Virginia, 1928; New York, New York, 1930; Oelwein, Iowa, 1928; Olympia, Washington, 1928; Oroville, California, 1929; Osage, Iowa, 1931; Palo Alto, California, 1928–29; Philadelphia, Pennsylvania, 1928; Rome, Georgia, 1928; Sandusky, Ohio, 1930; San Francisco, California, 1928; Secaucus, New Jersey, 1929–30; Shawnee, Oklahoma, 1930–31; Shenandoah, Pennsylvania, 1928; South Pasadena, California, 1928; Springfield, Massachusetts, 1928; Sunbury, Pennsylvania, 1929; Tacoma, Washington, 1928;

Trinidad, Colorado, 1928; Union City, Tennessee, 1929–30; Vincennes, Indiana, 1930–31; Washington, D.C., 1929; Water Valley, Mississippi, 1929–30; Webster Groves, Missouri, 1929.

It is the purpose of this article to set forth in tabular and interpretative form analytical summaries of salient features of the fifty-seven courses. From these summaries certain conclusions may be drawn as to recent practice in the teaching of history in the intermediate grades. Although what is being done may not be in complete harmony with what ought to be done, yet current practice reveals trends and tendencies which some persons feel should be taken into consideration in curriculum revision or construction.

Despite the fact that much is being said these days about the desirability of combining history and geography in a fusion course, only four of the fifty-seven courses are fusion courses, in whole or in part. In one of the four courses, only the work for Grade IV is outlined in a fusion course. The authors of this particular course specifically state that fusion was attempted in order to bridge the gap between the primary and intermediate grades.

Although many of the courses included in this study are entitled "Course of Study in Social Science" or "Outline for the Social Studies" instead of "Course of Study in History and Geography," examination shows that in the large majority of such cases the history and geography are outlined separately. This fact means that the fusion of history and geography in the intermediate grades exists today more in educational theory than in actual practice. There seem to be several reasons for this situation, chief among which is the division of opinion as to the advisability of complete integration, or fusion. Many educators believe that, although history and geography should be correlated whenever possible, complete fusion is neither wise nor practicable. They believe that history as a subject and that geography as a subject possess distinct characteristics which do not permit total merging. They hold that one does not need to apologize for the teaching of subjects like history and geography, for each of these subjects has a definite contribution to make to the educational program. These educators would no doubt agree with Judd in his statement:

> I am sure that in our new progressiveness we shall want children to see the world in all its fulness. We shall not make the mistake in the new progressive-

ness which was made in mere progressiveness of thinking that analytical studies are unnecessary. We shall look at the world with the analytical view of a good geographer, and then we shall look at the world as a good historian looks at it.[1]

A second explanation for the relatively low percentage of fusion courses is expressed in the following statement taken from the course of study for Joplin, Missouri.

In theory, at least, social science should be a unified subject throughout the elementary and junior high schools, and there is a tendency toward such unification, but as yet our textbooks are so written as to make the division into subjects such as geography, history, civics, and current events, seem advisable.[2]

Still a third reason is stated in the course of study for Olympia, Washington.

In the early primary grades the presentation of history, geography, and civics as separate subjects is manifestly unwise. The committee has not felt, however, that they are ready to recommend the "unit-fusion" plan of organization for all grades in the absence of well-organized, definitely worked-out, and thoroughly-tested unit courses to serve as models.[3]

Correlation rather than fusion seems to predominate in present-day courses in history and geography. The numerous statements recommending correlation of these two subjects indicate that there is a marked tendency in that direction. The following statement from the Baltimore course clearly expresses the point of view with regard to correlation found in many courses.

The organization of units in these two proposed courses [history and geography] is such that integration cannot at all times be made within these two fields. Upon certain occasions, however, the teacher will find that the content in history dovetails very nicely into the geography units which she is carrying on. In short, there will be many times when the class is studying geography and history units which are not identical, but there will also be frequent occasions when the alert teacher will sense and utilize possibilities for co-ordination even in these two fields.[4]

Of the items considered in this analytical study, specific organization of content was one of the most difficult to check for two reasons:

[1] Charles H. Judd, "The Training of Teachers for a Progressive Educational Program," *Elementary School Journal*, XXXI (April, 1931), 580.

[2] *Course of Study and Teachers' Manual for the Elementary Schools*, p. 155. Joplin, Missouri: James A. Koontz, Superintendent of Schools, 1930.

[3] "Course of Study in the Social Subjects, Geography, Grade VII," p. 3. Olympia, Washington: Olympia Public Schools, 1928 (mimeographed).

[4] Curriculum Revision Committee, *Proposed Course of Study in Geography and History*, p. 3. Baltimore, Maryland: Baltimore Public Schools, 1930.

(1) Many courses are in such brief form that it is impossible to detect the type of organization. (2) Some of the courses seem to be a combination of several types. If the method of organization of a course is not entirely clear, the course was not included in the summaries. A course clearly using a combination of two types of organization was recorded in two places in the summary.

Table I shows the frequency by grades of four types of organization in the fifty-seven courses examined. The data in this table indicate that the biographical method of organization predominates in Grade IV with the topical organization a close second, that in Grade V the biographical approach is not so prominent as either the

TABLE I

METHODS USED IN ORGANIZING HISTORY MATERIAL FOR TEACHING PURPOSES IN FIFTY-SEVEN COURSES OF STUDY

METHOD OF ORGANIZATION	FREQUENCY OF OCCURRENCE			
	Grade IV	Grade V	Grade VI	All Grades
Unit	8	11	11	30
Problem-project	7	5	5	17
Biographical	13	8	1	22
Topical	10	13	16	39

unit method or the topical approach, and that in Grade VI the biographical method is almost completely abandoned in favor of the unit and topical methods. It is interesting to note that the biographical method steadily loses in favor from Grade IV to Grade VI, whereas the topical method gains favor. The unit organization seems to be a popular method of approach in all the grades. The problem-project method, although not so prominent as the other three methods, has about an equal number of adherents in each of the three grades. The topical method leads in total frequencies, the unit method ranking second. The writer predicts, however, that within the next two or three years the positions of these two methods will be reversed.

Twenty-eight of the fifty-seven courses contain objectives of history-teaching in the intermediate grades, while twenty-nine make no mention of objectives. In most of the cases in which objectives

are not found, the courses are exceedingly brief; practically all that is given is the name of the textbook to be used in each grade. Table II summarizes the findings with regard to the number of courses that include objectives of history study for the intermediate grades. The significant finding in Table II is that, in the cases in which objectives are given, there is a marked tendency to state specific objectives for grades, sections, or units rather than to state general aims which have broad, and sometimes indefinite, meanings.

TABLE II

COURSES OF STUDY IN HISTORY INCLUDING OBJECTIVES

Type of Objective	Number of Courses
General objectives only	4
Specific objectives for each section, grade, or unit	10
Both general and specific objectives	14
No objectives given	29
Total	57

The statements of objectives vary from the most general to the very explicit. Even when specific objectives are stated for each section of each grade, the number varies considerably. For example, one of the fifty-seven courses gives only three objectives for the work in Grade IV B, whereas another course lists thirty-six objectives for the same work. The total number of objectives found in the fifty-seven courses was so great that the writer did not attempt to tabulate all of them. Sufficient tabulations were made, however, to secure a fair sampling of the objectives which occur with some degree of frequency. Those which are frequently mentioned, both in general and specific terms, are as follows:

1. An appreciation of the contribution of early founders and pioneers to our development
2. A knowledge of the differences between ways of living in Colonial days and in the present time
3. An understanding of how the Colonies under primitive conditions met their social needs
4. Definite knowledge of the early history of the country (specific items given)
5. A knowledge of the important incidents that were influential in the development of the country
6. Definite knowledge of the later development and growth of the country (specific items stated)

7. An understanding of the vast westward migration of American people
8. An appreciation of the contribution of inventors and statesmen to our development
9. A growing recognition of the fact that "heroes of peace" aid their country as much as the heroes of war
10. A knowledge of the development of transportation and communication
11. A knowledge of the outstanding events which have tended to make the United States a world-power
12. Definite knowledge of the early history of the home state
13. A feeling of pride and interest in the home and the community
14. A growing feeling of love of one's country
15. A growing realization of personal obligation to one's country
16. An awakening of civic and individual ideals
17. A conception of how different peoples have added their own peculiar contribution to the progress of civilization
18. A conception of how the present is an outgrowth of the past
19. An appreciation of our inheritance from the past
20. A growing interest in historical reading
21. An abiding interest in history that will grow and function through life
22. A growing appreciation of the influence of geographic factors on our history
23. Habit of using maps, aids, and other reference material
24. Habit of reading widely in the field of history

The lack of uniformity among the courses in the grade placement of similar topics and units leads to the inference that the best order of presentation of historical subject matter in the intermediate grades has not yet been determined.

Table III presents a summary of the placement of subject matter. In the case of each topic or unit the number in the table refers to the total number of times that the topic or unit is recommended in the courses examined. The possible frequency in each case is fifty-seven. It is clear from the data in Table III that in Grade IV B early American history takes first place, with state or local history a rather close second; in Grade IV A the same condition exists; in Grade V B early American history outstrips all other fields; in Grade V A later American history predominates; in Grades VI B and VI A the topic of the old-world background leads.

It was very evident from an examination of the courses that one of the most striking points of disagreement in the placement of subject matter concerns the use of a chronological or a counter-chrono-

logical approach. When Grades IV, V, and VI were considered as one unit, it was found that thirty-eight out of fifty-one courses which yielded themselves to a consideration of this point use the counter-chronological approach, whereas thirteen use the chronological. There still seems to be a marked tendency to present United States history before presenting the old-world background, but some courses indi-

TABLE III

DISTRIBUTION OF SUBJECT MATTER ACCORDING TO GRADE PLACEMENT

TOPIC OR UNIT	FREQUENCY OF RECOMMENDATION					
	Grade IV B	Grade IV A	Grade V B	Grade V A	Grade VI B	Grade VI A
Ancient civilization along the Mediterranean	.....	.....	.....	3	.....	.....
Biographical stories of leaders and heroes	9	9	.....	.....	.....	.....
Biographical stories of leading Americans	.....	.....	2	1	.....	.....
Citizenship	2	2	.....	1	1	1
Development of the United States through the development of transportation and communication	.....	.....	1	.....	.....	.....
Early American history	19	18	36	9	3	3
Early civilization in Europe	1	.....	.....	.....	.....	.....
Egyptians and Phoenicians	1	.....	.....	.....	.....	.....
Greeks and Vikings	1	.....	.....	.....	.....	.....
History of the Middle Ages	.....	.....	1	1	.....	.....
History of Rome and Greece	.....	2	1	.....	.....	.....
Invention and discovery	.....	.....	.....	1	.....	.....
Later American history	.....	1	15	38	8	11
Man's achievement in manufacturing	.....	.....	.....	.....	1	.....
Man's achievement in transportation, communication, and art	.....	.....	.....	.....	.....	1
Old-world background	.....	.....	.....	.....	34	34
State or local history	15	15	1	1	5	.....
Transportation	.....	1	.....	.....	.....	.....

cate the existence of a feeling that this order of presentation should be reversed.

The educational principle that there can be no growth apart from self-activity is given recognition in twenty-one of the fifty-seven courses. Inasmuch as the relation of child activity to the learning process has been given much emphasis during recent years, it is rather surprising to find that only 37 per cent of the fifty-seven courses list or suggest activities for the children. The activity lists vary in length from a very meager enumeration to an almost unlimited number of suggestions. For example, one course mentions

only four activities for all three grades, whereas another course gives seventy-six activities for only one section of one grade. As in the case of the objectives, the total number of different activities was too great to tabulate. When those activities which apply only to specific units were eliminated, however, there remained certain activities which are frequently mentioned in the twenty-one courses. These activities are given in the following list. The order of the listing has no significance.

1. Constructing miniature objects out of wood, paper, and clay
2. Drawing maps, charts, and diagrams
3. Making posters
4. Drawing or painting illustrations
5. Making a frieze
6. Composing and presenting historical plays
7. Preparing and giving a puppet show
8. Making a moving picture
9. Making booklets
10. Reading related material
11. Describing experiences, objects, and situations related to history
12. Discussing problems
13. Using current magazines and papers
14. Reporting on readings
15. Contributing to class discussions
16. Debating
17. Carrying out projects
18. Dramatizing
19. Making sand-table scenes
20. Carving representations of objects out of soap
21. Dressing dolls to represent certain characters
22. Building a museum
23. Preparing an exhibit
24. Making excursions
25. Presenting a historical pageant
26. Making collections of pictures, articles, and relics
27. Studying lantern slides

A feature of recent courses in history for the intermediate grades is the emphasis on tests to be given to the children at the completion of a specific unit. This objective means of indicating to the teacher the definite attainments to be reached is still in its infancy as far as frequency of practice is concerned, but it is clearly evident that there is a movement in that direction.

Practically all the courses in which attempts are made to outline the work with at least a fair degree of detail include bibliographies for reference work. In most cases the bibliographies give references for the teacher and references for the pupil.

CONCLUSION

1. In actual practice, the correlation of history and geography is more prevalent at the present time than the fusion of the two fields. Only 7 per cent of the 57 courses are fusion courses.

2. The three leading types of organization are the topical, the unit, and the biographical. The biographical organization predominates in Grade IV, while in Grades V and VI the topical and the unit organizations are the leading types. When all three grades are considered, it is found that 36.1 per cent of the recommendations made specify the topical organization; 27.8 per cent, the unit organization; 20.4 per cent, the biographical organization; and 15.7 per cent, the problem-project organization.

3. When objectives are given, there is a marked tendency to state them in specific terms and, in courses rich in detail, to make the objectives applicable to specific units.

4. The lack of uniformity in the choice of subject matter and its placement in the various grades gives evidence that the best order of presentation of historical material needs to be objectively determined. If Grades IV, V, and VI are considered as one unit, the large majority of the courses are outlined in the counter-chronological order.

5. Although the principle of the relation between child activity and the learning process is given recognition by only 37 per cent of the courses, most of the suggestions for activity in the courses which recognize the doctrine of activity are varied and extensive.

6. Tests by which pupil attainment may be definitely checked are included in a few of the detailed courses—a fact which indicates a movement in the direction of setting up objective standards for history in the intermediate grades.

7. There is a marked tendency to stimulate wide reading in history by the inclusion of extensive bibliographies, both for the teacher and for the pupil.

SUMMARY OF INVESTIGATIONS RELATING TO GRAMMAR, LANGUAGE, AND COMPOSITION (JANUARY, 1929, TO JANUARY, 1931). I

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This series of articles presents a summary of objective studies in the language branches of English instruction that have appeared during the years 1928–30. No attempt was made to review the studies published in 1931, although a few are included. The article supplements an earlier publication[1] which reported the findings of studies made prior to January, 1929.

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[1] R. L. Lyman, *Summary of Investigations Relating to Grammar, Language, and Composition*. Supplementary Educational Monographs, No. 36. Chicago: Department of Education, University of Chicago, 1929.

5. BAKER, ELIZABETH W. "A Social Basis for Oral Composition," *English Journal*, XIX (March, 1930), 208–13.

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37. MCCARTHY, DOROTHEA A. *The Language Development of the Preschool Child.* Minneapolis, Minnesota: University of Minnesota Press, 1930. Pp. xiv+174.

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38. MALONEY, ESTELLE L., and RUCH, G. M. "The Use of Objective Tests in Teaching as Illustrated by Grammar," *School Review*, XXXVII (January, 1929), 62–66.

Attempts to determine the teaching value of objective-test materials by comparing the textbook method, the test method, and a combined textbook and test method in teaching grammar to pupils in Grades IX, X, and XI.

39. MARYE, MARY ELIZABETH. "The Construction of a Rating Form for Evaluating Composition Textbooks." Unpublished Master's thesis, Department of Education, University of Chicago, 1928. Pp. 275. See also "Form for Rating Textbooks in English Composition Prepared for the Ninth and Tenth Grades," *School Review*, XXXVIII (February, 1930), 124–37.

Determines from various sources the criteria generally accepted for English curriculums and constructs a score card by compiling the judgments of experts in education and the judgments of teachers with regard to practices represented in six widely used textbooks and representative courses of study.

40. MATRAVERS, C. H. "A Corrective-Language Program," *English Journal*, XVIII (September, 1929), 564–70.

Reports a study designed to determine the social utility of various conventional language forms by the analysis of 107,000 words of daily conversation.

41. MEADOWS, LEON RENFROE. *A Study of the Teaching of English Composition in Teachers Colleges in the United States.* Teachers College Contributions to Education, No. 311. New York: Teachers College, Columbia University, 1928. Pp. 96.

Reports data secured through the co-operation of English teachers in sixty-eight teachers' colleges in twenty-nine states on the chief objectives in teaching English composition, the chief difficulties in the teaching, the extent to which textbooks are used, and the methods of dealing with important problems.

42. NASH, H. B., and BUSH, FRED R. "Mastery of Minimum Essentials in English Grammar," *Journal of Educational Research*, XXI (April, 1930), 309–14.

A study of the grade placement of items in courses of study in grammar and a report of progress made by 1,119 junior high school pupils in West Allis, Wisconsin, on a simplified course based on the study.

43. NEBLICK, MARY EDITH. "An Investigation of the Value of the Laboratory Method in Teaching Composition in the Ninth Grade." Unpublished Master's thesis, Department of Education, University of Chicago, 1930. Pp. vi+101.

Reports the findings from experimental teaching in two ninth-grade English classes, showing that the laboratory method was more effective in reducing errors and the direct instructional method more effective in developing general composition ability.

44. PAVEY, MARY CHRISTINE. "Discrimination Difficulties in the Learning of Tense Forms of Verbs and of Case Forms of Pronouns." Unpublished Doctor's thesis, Department of Education, University of Chicago, 1930. Pp. vii+314.

Reports a study to determine the possible psychological causes for the high frequency of oral errors in verbs and pronouns among elementary-school children.

45. POLEY, IRVIN C. "Variety in Sentence-Structure: Its Relation to Technical Excellence in Composition and to Intelligence," *Elementary English Review*, VI (May, 1929), 126–28.

Reports high correlation between variety of sentence structure and excellence in composition-writing and only slight correlation between sentence structure and general intelligence.

46. PRESSEY, L. W., and PRESSEY, S. L. "Language Concepts Needed by College Freshmen," *Modern Language Journal*, XIV (May, 1930), 624–30.

"Attempts to determine, by a study of foreign-language and English textbooks, how many and what grammatical concepts may be expected of a college Freshman at entrance."

47. RIVLIN, HARRY N. *Functional Grammar*. Teachers College Contributions to Education, No. 435. New York: Teachers College, Columbia University, 1930. Pp. vi+94.

Analyzes the functions and importance of the items of grammar, showing changes in findings of committees of English and changes in textbooks since 1900.

48. RODGERS, GRACE S. "A Critical Study of the Grammatical Errors of Junior High School Pupils." Unpublished Master's thesis, University of Southern California, 1930. Pp. 34.

A study of language errors made by 29,000 junior high school pupils in Los Angeles, showing that 82.3 per cent of the errors occurred among only 24 types of errors.

49. RUGG, HAROLD; KRUEGER, LOUISE; and SONDERGAARD, ARENSA. "Studies in Child Personality: I, A Study of the Language of Kindergarten Children." *Journal of Educational Psychology*, XX (January, 1929), 1–18.

Analysis of the conversation of twenty-seven children, indicating that the child is essentially a self-assertive individual, that he is a linguistic experimentalist, that he reveals only slight evidences of intellectual curiosity and little interest or ability in more than the simplest forms of experimental thinking. School procedures recommended are (1) to bring the individual into growing social consciousness and (2) to increase the interplay of personality upon personality.

50. SMITH, DORA V. *Class Size in High School English*. Minneapolis, Minnesota: University of Minnesota Press, 1931. Pp. xii+310. See also "Problems of Class Size and the Efficiency of Instruction in English," *English Journal*, XIX (November, 1930), 724–36.

A critical review of objective studies concerning the cost and effectiveness of secondary-school classes of various sizes. Reports an elaborate experiment with contrasted classes in ninth-grade English in the University High School of the University of Minnesota, in which no material differences in deferred values due to class size were found.

51. SPEER, DOROTHY. *An Experimental Evaluation of Seven Composition Scales.* Johns Hopkins University Studies in Education, No. 14. Baltimore: Johns Hopkins Press, 1929. Pp. x+86.

Ranks seven composition scales in the order of their "objectivity" and in the order of the time needed for their use, showing that general merit scales yield more objective results than diagnostic scales.

52. STODDARD, GEORGE D. "A Survey of English Grammar in the High Schools of Iowa, 1926–1927," *Journal of Educational Research*, XIX (January, 1929), 13–21.

About seven thousand students in Grades IX–XII were tested in spelling, punctuation, and grammar, and language norms were established.

53. SULLIVAN, HELEN J. *Achievement of North Dakota High-School Pupils in the Minimum Essentials of English with Suggested Remedial Measures.* Departmental Bulletin of the University of North Dakota, Vol. XIII, No. 1. Grand Forks, North Dakota: University of North Dakota, 1929. Pp. 46.

A state-wide survey to determine the achievement of high-school pupils in minimal essentials in written English.

54. SYMONDS, PERCIVAL M. "Real Topics for Writing and Speaking," *School Review*, XXXVIII (December, 1930), 765–75.

Fifty-four observers discover that the average number of words spoken per pupil in an English class period was 34; the average number spoken by the teachers, 988. Evaluates the degree of frequency of need, reality, and importance for high-school pupils of 24 topics for written composition and 28 topics for oral composition.

55. SYMONDS, PERCIVAL M. "Practice versus Grammar in the Learning of Correct English Usage," *Journal of Educational Psychology*, XXII (February, 1931), 81–95.

Reports experimental teaching with four classes with six procedures: (1) in pure repetition of correct forms, (2) in repetition of correct and incorrect forms, (3) in knowledge of definitions, rules, and principles of grammar, (4) in grammar analysis, (5) in choice of correct constructions, and (6) in combination of the above procedures. Procedure 6 yielded the best results. The major conclusion is that "repetition of correct forms, where it is clearly indicated what is correct and what the critical point at issue is, has more influence on usage than any procedure with grammar."

56. SYMONDS, PERCIVAL M., and CHASE, DORIS HARTER. "Practice vs. Motivation," *Journal of Educational Psychology*, XX (January, 1929), 19–35.

Compares results in learning English usage by repetition and by motivated practice, showing that repetition brings greatest gains.

57. SYMONDS, PERCIVAL M., and DARINGER, HELEN FERN. "Studies in the Learning of English Expression: IV, Sentence Structure," *Teachers College Record*, XXXII (October, 1930), 50–64.

Analytical study of the persistence of errors in sentence structure, using compositions on Hillegas scale for different grade levels, Grades IV–XII, inclusive.

58. SYMONDS, PERCIVAL M., and LEE, BALDWIN. "Studies in the Learning of English Expression: I, Punctuation," *Teachers College Record*, XXX (February, 1929), 461–80.

Analytical studies of the persistence of punctuation errors through the grades and high school and of the relation between the frequency of such errors and the quality of written compositions as measured by composition scales.

59. SYMONDS, PERCIVAL M., and LEE, BALDWIN. "Studies in the Learning of English Expression: II, Capitalization," *Teachers College Record*, XXX (April, 1929), 686–92.

Analytical studies of the persistence of capitalization errors through the grades and high school and the relation of technical errors in capitalization to composition quality as measured by composition scales.

60. THOMAS, JESSE EDWARD. "The Elimination of Technical Errors in Written Composition through Formal Drill." Unpublished Master's thesis, Department of Education, University of Iowa, 1930. Pp. 236.

Attempts to determine through experimental teaching the value of formal drill exercises in reducing English errors in formal situations and in written compositions.

61. WASSON, WILLIAM HENRY. "A Controlled Experiment in the Size of Classes." Unpublished Master's thesis, University of Chicago, 1929. Pp. vi+127.

Compares the achievement of ninth-grade pupils in small and large classes (twenty-five and forty pupils), finding only slight differences in attainment.

62. WILSON, G. M. "New Standards in Written English," *Elementary English Review*, VI (May, 1929), 117–19, 132.

Reports studies of the number of specific errors in English made by individual pupils in elementary-school classes, showing that through individualized instruction great improvement could be accomplished in a comparatively short time.

63. WITTY, PAUL A., and FRY, MABEL. "The Vocabulary Content of Compositions Written by College Students," *Journal of Educational Research*, XIX (February, 1929), 135–38.

Examination of papers written by 340 college students shows little differences in the vocabularies of Freshmen and upper-class men. Both groups exhibit very meager vocabularies.

[*To be continued*]

CHILDREN'S NATURE INTERESTS

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Are children interested in nature primarily? Authors of books for juveniles have encouraged a belief that they are, while others, more scientific than literary minded perhaps, are still trying to discover the facts of the case. Numerous experiments have been undertaken with two principal objectives: first, to ascertain where the greatest interest of children lies; second, assuming that nature proves to possess the greatest interest for children, to determine which phase is most popular.

One of the earliest investigations was made by Trafton in 1904 in Grades IV–VIII in the public schools of Passaic, New Jersey.[1] This study was made by means of a questionnaire and involved almost one thousand children. The results indicated that children have a limited acquaintance with nature; that the color, size, and sounds of animals appeal most; that the appearance of animals most impresses the younger children; and that the activities of animals are most impressive in the upper grades.

Finley conducted studies of children's interests in science materials.[2] In the first study a live "mud puppy" (*Necturus maculatus*) was shown to 1,716 children in seven elementary schools, the children being permitted to ask questions after going in small groups to see the animal. A record of the questions asked was kept. The classification of these questions showed that those with regard to identification were most numerous, second in importance were questions about activities, and questions with regard to environment were ranked third. The children in the lower grades were concerned with identification, while in the upper grades activity interests predominated.

[1] Gilbert H. Trafton, "Children's Interests in Nature Material," *Nature-Study Review*, IX (September, 1913), 150–60.

[2] Charles W. Finley, "Some Studies of Children's Interests in Science Materials," *School Science and Mathematics*, XXI (January, 1921), 1–24.

Finley's second study was made for the purpose of determining (1) whether children are most interested in plants, animals, or physical materials and (2) in what phases of these three groups children's interests center. This investigation involved 827 children in Grades III–VIII, inclusive, in five different schools. Finley's procedure was to take into the schoolroom three striking and unfamiliar objects. He chose a mounted black skimmer for the animal, pendulums of various lengths and materials for the physical objects, and a resurrection plant. These were presented to the classes in varying order and were explained and discussed with equal amounts of stress, each class participating freely in the discussion for a period of from eight to ten minutes. During the written exercise given on the following day, the teacher permitted each pupil to write about only one of the three objects. Two weeks later one class was asked to indicate on slips of paper which of the objects previously demonstrated they would like to discuss again. The boys chose the bird first, the pendulums second, and the plant third; the girls chose the bird first, the plant second, and the pendulums last. More than half the choices expressed in the check experiment were for the bird. Fifty-four per cent of the questions asked on the first day were about the bird; 25 per cent, about the plant; 21 per cent, about the pendulums.

Mau undertook to carry out similar experiments with 1,988 children in the kindergarten and Grades I–III in nine representative schools in and about Chicago.[1] The children were shown a pepper plant with many red berries on it, a gray cat, and a toy engine with complete works. They were asked, "If you could choose one of these three things for your very own, which one would you choose?" and "Why?" They were then allowed to ask any question they wished about the things. The children whispered their choices to the experimenter and her assistants. They manifested a strong preference for the engine, the cat second, and the plant third. There was a rising interest in the cat, a waning interest in the engine, and little variation in the interest in the plant from the kindergarten to Grade III.

[1] Laura Emily Mau, "Some Experiments with Regard to the Relative Interests of Children in Physical and Biological Nature Materials in the Kindergarten and Primary Grades," *Nature-Study Review*, VIII (November, 1912), 285–91.

Mau's second investigation was carried out in the same schools and grades, and responses were received from 2,085 children. For this experiment she selected a turtle dove, a sensitive plant, and two bar magnets and iron filings. The children were allowed to feed and water the bird; they touched the sensitive plant and watched its leaves suddenly close; and two children, with the others looking on, picked up the iron filings with the magnet. After a large number of the children had participated in these activities, the materials were taken away. Ten days later the experimenter returned to hear the questions which the children wanted to ask. The questions were whispered to her, classified, and discussed. The order of interest for boys seemed to be animal life, physical materials, and plant life; and for the girls, animal life, plant life, and physical materials. The interest in the birds was paramount in all grades. Use, function, and purpose appealed to the child rather than form, size, color, and arrangement.

It seemed desirable to obtain evidence on this question of children's interests when the study was free from the limitations of the school. Consequently, a study was made of the questions and observations written to *St. Nicholas* under the caption "We Will Ask *St. Nicholas* about It."[1] Four hundred and forty-seven questions and 295 observations were analyzed. These came from 732 children: 301 boys with an average age of 11.9 years and 431 girls with an average age of 12.08 years. Sixty-one per cent of the questions and observations dealt with animals, 20.6 per cent with plants, 11.6 per cent with physical materials, and 1.8 per cent with miscellaneous matters. The animals most interesting, in the order of importance, were insects, birds, and common mammals; the most interesting plants were wild flowering plants, trees, and garden plants; and the most interesting physical materials were elementary physics, geographical and geological materials, and astronomical materials. Nearly two-thirds of the questions and observations were concerned with activities. Questions dealing with identification were second in importance.

The *St. Nicholas* results were corroborated by Clem Oren Thomp-

[1] Elliot R. Downing, "Children's Interest in Nature Material," *Nature-Study Review*, VIII (December, 1912), 334–38.

son,[1] who analyzed thirty-two state courses, nineteen from typical large cities and thirty from small cities. An analysis of the subjects treated in the Cornell "Leaflets" again confirms the conclusions reached in the *St. Nicholas* study.[2] In the September, 1921, issue of the *Cornell Rural School Leaflet* Palmer requested that teachers send in the nature-study questions asked by the pupils in order to determine the nature interests of rural children as revealed by their questions.[3] The results, based on the first five hundred questions submitted, gave the following percentages: 62.8 per cent dealt with zoölogy (25 per cent of which concerned invertebrates; 15 per cent, birds; 12.2 per cent, mammals; reptiles, next; and fish, last); 21.8 per cent dealt with botany; and 5.2 per cent dealt with inorganic nature.

In 1921 an experiment was carried on through observation to determine what nature topics were most commonly presented artificially to the child through toys and books. Apparently the manufacturers assumed that the most desirable nature topics involve both common and unique forms of life. Toy animals were found to be the most common. The dog, horse, and monkey held the first three places, respectively.

A study of children's interests in nature was reported by Pollock in 1924.[4] He had placed in the hands of every eighth-grade child in Columbus, Ohio, a form which called for the making of a list of no more than five things, or questions concerning five things, in which the child was most interested. The children were given over night to make the list. The 3,500 questions received were grouped under appropriate headings and ranked by frequency of appearance. There were 42 ranks in all. Plants ranked 9.5; animals and trees, 23.5; engines, 36.5; and flowers, 39. Questions about electricity headed

[1] Clem Oren Thompson, "Science Materials Used in Instruction in the First Six Elementary Grades." Unpublished Master's thesis, Department of Education, University of Chicago, 1920.

[2] Reported in Elliot Rowland Downing, *Teaching Science in the Schools*, p. 92. Chicago: University of Chicago Press, 1925.

[3] E. Lawrence Palmer, "How To Meet Some of Children's Nature Interests," *Nature-Study Review*, XVIII (January–February, 1922), 23–30.

[4] C. A. Pollock, "Children's Interests as a Basis of What To Teach in General Science," *Educational Research Bulletin* (Ohio State University), III (January 9, 1924), 3–6.

the list. The recommendations were that, as far as practicable, provisions should be made for sex differences in interests and that the "Children's Interest List" evolved as a result of the study should direct the way in any general-science course.

In May, 1929, an experiment was carried out by the writer in the Demonstration School of the San Jose State Teachers College, San Jose, California, which revealed some interesting findings about children's nature interests. The purposes of this experiment were to discover whether children's interests really lie in nature materials, to determine in which fields of nature-study children are most interested, and to ascertain which objects in each of the nature-study fields are most interesting to children. One hundred and nineteen children in Grades IV–VI, inclusive, with an age range of ten to thirteen years participated in the experiment.

Observation, rating sheets, and question and composition responses were used. The rating sheet was thoroughly explained and illustrated on the blackboard before the children were asked to rate their interests. The names of the objects were so arranged that the least interesting, in the investigator's judgment, would be first and the most interesting last. The rate sheet follows.

RATE SHEET

WHICH OF THE FOLLOWING DO I LIKE BEST?

In each of the following groups write one (1) after the thing you like best, two (2) after the thing you like next best, three (3) after the thing you like third best, and four (4) after the thing you like least.

I. Minerals—gold, oil, quicksilver, stones, coal, jewels, etc. _____
II. Plants—trees, bushes, mosses, ferns, flowers, etc. _____
III. Mechanics—motors, engines, radios, meccano set, aeroplanes, etc. _____
IV. Animals—frogs, birds, snakes, squirrels, insects, etc. _____

In each of the following groups write one (1) after the thing you like best, two (2) after the thing you like next best, three (3) after the thing you like third best, and four (4) after the thing you like least.

MINERAL GROUP

I. Liquid minerals—oil, quicksilver, etc. _____
II. Freak minerals—fossils, wood turned to stone, etc. _____
III. Valuable minerals—gold, silver, iron, coal, etc. _____
IV. Valuable stones—crystals, jewels, gems, etc. _____

PLANT GROUP

I. Mosses and algae—seaweeds, mosses, etc. _____
II. Trees—birch, sugar maple, oak, pine, redwood, etc. _____
III. Ferns—maidenhair, Boston fern, etc. _____
IV. Flowers—buttercups, violets, roses, poppies, etc. _____

MECHANIC GROUP

I. Building sets—erector, meccano sets, etc. _____
II. Talking devices—telephone, vitaphone, radio, etc. _____
III. Motors and engines—steam, gas, electric, etc. _____
IV. Air machines—balloons, dirigibles, aeroplanes, etc. _____

ANIMAL GROUP

I. Reptiles—snakes, lizards, turtles, alligators, etc. _____
II. Insects—flies, mosquitoes, fleas, butterflies, etc. _____
III. Birds—crow, bluebird, magpie, sparrow, canary, etc. _____
IV. Mammals—dogs, bears, lions, skunks, chipmunks, etc. _____

What else are you interested in?

After filling out the rate sheet, the children in each half-grade went to an adjoining room and there actually observed representative objects from each of the sixteen groupings. These objects were arranged on four different tables under the four major captions: minerals, plants, mechanics, and animals. The specimens were carefully selected to include objects which are not common, at least in the average home, and which had supposedly equal appeals for children.

On the animal table were a Pacific blue-bellied lizard in a glass cage, a Tahoe chipmunk in a small wire cage with a treadwheel, a large black stinkbeetle in an open glass jar, and a yellow-billed magpie in a small parrot cage. On the plant table were a large (four-foot) sporing sword fern in a plant pot, a brilliant spray of flowering peach in a bright silver vase, a large mass of lace lichen on an oak branch, and a small acacia tree in bloom. On the mechanics table were a small, home-made, electric motor; two model aeroplanes (one a model of the Spirit of St. Louis and the other a tri-motored biplane of metal); a meccano set open to view and a model wheelbarrow constructed with the set; and a small crystal radio set with earphones. On the mineral table were a small vial of quicksilver, a large piece of anthracite coal, a large section of petrified *Sequoia gigantea* which showed annual rings and knots vividly, and a set of twenty model glass crystals showing the various crystalline forms.

The children remained in the observation room about seven minutes. After the first minute the number of children at each table was noted at intervals of thirty seconds for five minutes. While in the room, the children were not permitted to ask questions. They were allowed to touch or handle any of the objects, except to take the animals out of their cages. Table I indicates the children's interests as determined by the number of children at the various tables. After visiting the observation room, the children were per-

TABLE I

NUMBER OF CHILDREN IN LOW-FOURTH TO HIGH-SIXTH GRADES WHO OBSERVED FOUR CLASSES OF OBJECTS AND RANKS OF CLASSES OF OBJECTS ACCORDING TO NUMBER OF CHILDREN OBSERVING EACH

GRADE	MINERALS		PLANTS		MECHANICS		ANIMALS	
	Number of Children	Rank of Class of Objects	Number of Children	Rank of Class of Objects	Number of Children	Rank of Class of Objects	Number of Children	Rank of Class of Objects
Grade IV:								
Low	39	2	8	4	53	1	35	3
High	50	3	3	4	54	2	76	1
Grade V:								
Low	46	2	9	4	22	3	67	1
High	76	2	11	4	46	3	101	1
Grade VI:								
Low	82	1	3	4	21	3	50	2
High	77	2	11	4	52	3	102	1
All grades	370	2	45	4	248	3	431	1
Children in all grades observing during noon hour	38	2	2	4	25	3	61	1

mitted for a period of fifteen minutes to ask questions concerning the objects observed. Each question was tallied opposite the major field of nature involved and was answered as briefly as possible, an effort being made not to stimulate other inquiries into the same subject. Table II indicates the interests of the children as determined by their questions.

Following the fifteen-minute period allowed for answering the questions asked, the children were asked to re-rate their interests on a duplicate copy of the first rating sheet. They were asked to disregard their previous ratings and to indicate what their interests were at that moment. Correlations were made between the first

and second ratings. The coefficients of correlation in each of the major fields ranged up and down the scale from −1.00 to +1.00, the average correlations being +.21 for Grade IV, +.35 for Grade V, and +.43 for Grade VI. Table III indicates the average ratings of the boys and the girls in each grade and the combined ratings.

At the bottom of the rating sheet the children were asked to list other things in which they were interested. Foreign countries led the list, being mentioned nine times. Books, food, clothing, Boy

TABLE II

NUMBER OF QUESTIONS CONCERNING FOUR CLASSES OF OBJECTS ASKED BY CHILDREN IN LOW-FOURTH TO HIGH-SIXTH GRADES AND RANK OF CLASSES OF OBJECTS ACCORDING TO NUMBER OF QUESTIONS ASKED

GRADE	MINERALS		PLANTS		MECHANICS		ANIMALS	
	Number of Questions	Rank of Class of Objects	Number of Questions	Rank of Class of Objects	Number of Questions	Rank of Class of Objects	Number of Questions	Rank of Class of Objects
Grade IV:								
Low.....	0	3.5	1	2	3	1	0	3.5
High.....	1	2.5	0	4	1	2.5	3	1
Grade V:								
Low.....	2	2	1	3	0	4	4	1
High.....	4	2	0	4	2	3	13	1
Grade VI:								
Low.....	0	4	1	2	3	1.5	3	1.5
High.....	2	2	0	4	1	3	8	1
All grades ..	9	3	3	4	10	2	31	1

Scouts, and school came next, each being listed four times. Flags, nursing, pictures, stars, weapons, and woodwork received three votes each. Houses, Indians, and teachers received two votes each.

The composition response was secured seven days after the rating, observing, and questioning had taken place. The teachers in each of the three grades asked the children to write about the thing that had most interested them in the observation room the week previous. Of 105 responses, 66 concerned animals; 21, mechanics; and 18, minerals. The things most frequently mentioned were: chipmunk, 33 times; magpie, 25; crystals, 11; aeroplanes, 10; lizard, 7; radio, 5; motors and quicksilver, 4 each. A count of the responses from each grade and from the combined group indicated that interest in animals came first, mechanics second, minerals third, and plants fourth.

The San Jose experiment is interesting from the standpoints of method and results. The check afforded by actual observation gives this experiment an additional scientific merit. The results in general corroborate the results of former experiments. From the results the following principles might be drawn: first, that children are interested in nature objects; second, that live animals are most interesting; third, that the unusual, unique, and spectacular things grip the interest of the children; and fourth, that children's interests vary from time to time. Such a set of principles could easily be a guide in the selection of subjects for nature-study in the intermediate grades. However, the results presented are not to be construed as a proof of anything but rather as a set of findings which are interesting and from which the reader should draw his own conclusions or form his own opinions.

TABLE III

AVERAGE RATINGS OF BOYS AND GIRLS IN GRADES IV–VI INDICATED BY RESPONSES ON RATE SHEETS

CLASS OF OBJECTS	GRADE IV		GRADE V		GRADE VI		AVERAGE TOTAL RANK		
	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Both
Minerals	1	2.5	3	2.5	3	3	2.5	3	2
Plants	3	4	2	4	2	4	2.5	4	4
Mechanics	4	2.5	4	1	4	1.5	4	1.5	3
Animals	2	1	1	2.5	1	1.5	1	1.5	1
Mineral group:									
Liquid	3.5	4	4	3	4	3	4	3	4
Freak	3.5	3	1	4	3	4	2.5	4	3
Valuable	2	2	3	1	2	2	2.5	2	2
Valuable stones	1	1	2	2	1	1	1	1	1
Plant group:									
Mosses and algae	4	3	4	4	4	2	4	3	4
Trees	3	1	2.5	3	2	1	2.5	1	2
Ferns	2	4	2.5	2	3	4	2.5	4	3
Flowers	1	2	1	1	1	3	1	2	1
Mechanic group:									
Building sets	3	4	4	4	4	4	4	4	4
Talking devices	1	2	1	2	1	2	1	2	1.5
Motors and engines	4	3	3	3	3	3	3	3	3
Air machines	2	1	2	1	2	1	2	1	1.5
Animal group:									
Reptiles	4	3	3	1	4	3	4	2.5	3
Insects	3	4	4	4	3	4	3	4	4
Birds	1	2	2	3	2	2	2	2.5	2
Mammals	2	1	1	2	1	1	1	1	1

THE SELECTION OF BASAL READERS

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INTRODUCTION

The writer recently consented to assist a member of a state textbook commission in the evaluation of basal readers proposed for adoption. The evaluation proved no easy task. In no field of education has so much progress been made as in the field of elementary reading. Numerous investigations in reading have been made, and the results of the significant investigations have been reflected in the making and writing of reading books. The many unusual and attractive series of readers recently published may cause a teacher or a superintendent to make a selection based on a whim or caprice of the moment unless he is guided in his judgment by sound and adequate criteria.

The tentative criteria set up for evaluating the readers submitted for state adoption were subsequently expanded and validated, with the help of a number of able collaborators. This article presents a scale for evaluating basal readers for the elementary school with an explanation of the reasons for the various items in the scale. The scale would be worthless if it were made with a view to selling any particular book. The criteria have been set up in answer to the question: "What are the essential qualities necessary for basal readers, particularly basal readers for state-wide use?" No book yet published will make a perfect score on the scale. Moreover, the different items are, in most instances, so worded that the scorer, in giving them his own interpretation, will find the scale operating to select readers which comply with his own judgment rather than with that of another person. If an impersonal and strictly objective result is to be secured, a number of competent persons must score the various books independently, the mean of their scores on the various items being used. When a committee uses the scale in this manner, a very reliable judgment will be achieved—a judgment not unduly influenced by any one member.

The scale will prove helpful to anyone who finds himself faced with the problem of selecting a basal reader. It will also prove helpful to education classes studying the field of reading, for the various criteria used are, in no small sense, a summary of many of the more important results of research in reading over the past several years.

Teachers' manuals are of fundamental importance, particularly for textbooks that are to have state-wide use. There are always a considerable number of teachers within a state who are relatively untrained; to these a manual can be of great help, especially in the case of the manuals for the primary grades.

CRITERIA FOR JUDGING THE TEACHER'S MANUAL FOR THE FIRST GRADE

1. Does it give a clear exposition of the theory underlying the method?
2. Does it provide for a preprimer period of several weeks to develop in the pupils a genuine desire to read?
3. Does it utilize child experience and children's interest as the foundation of the preprimer training?
4. Does it provide the means to teach each child an adequate reading vocabulary before he begins to read in the primer?
5. Does it make ample provision for meeting individual differences?
6. Does it provide for classification of pupils on the basis of their progress in learning to read?
7. Are tests for measuring pupil progress and achievement included in the manual?
8. Are the tests properly made, suitable, and of sufficient variety?
9. Does it provide ample directions for preparing fruitful and interesting seat work and other activities related to reading?
10. Does it introduce phonics, if at all, late in the year?
11. Are the lesson plans and techniques provided for teaching in accord with best modern practices?
12. Does the manual explain adequately how to diagnose and remedy pupil weaknesses?
13. Does it make ample provision for reading outside of class and school and give suitable lists of books for such reading?
14. Is it correct in theory, and does it follow its expressed theory in the practices advocated?
15. Is it generally non-technical in terminology, easy to understand, and easy to follow?

The first-grade experiences of a child and the way he is taught beginning reading are of great importance. Therefore, to the extent that a first-grade manual determines first-year teaching methods in

reading (undoubtedly a large extent in the case of state-adopted textbooks) the manual becomes of fundamental importance. Indeed, in the judgment of the writer, the manual possesses such importance that he would refuse to consider any series of readers if the first-grade manual fails to reach a rather high standard.

Item 1 of the criteria for judging the first-grade manual is included because a clear exposition of the theory is an important factor in determining whether a teacher can make intelligent use of the methods advocated. Item 14 is of obvious importance, and Item 15 is important for the reason that the teachers who most need the manual are usually the teachers who have had the least technical training. The manual will be usable if it fulfils the requirement of Item 15. Almost all the other criteria for judging the first-grade manual have been proved by research, practice, or experimentation to be desirable or necessary. For example, Item 10 is included because careful, controlled experiments have shown the necessity of postponing phonetic training until children have established some right habits of reading. The reasons for the remaining items need not be discussed in detail.

Criteria for Judging the Teacher's Manual for Second or Third Grade

1. Does it give a clear exposition of the theory underlying the method?
2. Does it make ample provision for meeting individual differences?
3. Does it provide for classification of pupils on the basis of their progress in learning to read?
4. Are tests for measuring pupil progress and achievement included in the manual?
5. Are the tests properly made, suitable, and of sufficient variety?
6. Does it provide ample directions for preparing fruitful and interesting seat work and other activities related to reading?
7. Are the lesson plans and techniques for teaching in accordance with best modern practices?
8. Does the manual explain adequately how to diagnose and remedy pupil weaknesses?
9. Does it make ample provision for reading outside of class and school and give suitable lists of books for such reading?
10. Is it correct in theory, and does it follow its expressed theory in the practices advocated?
11. Is it generally non-technical in terminology, easy to understand, and easy to follow?

Manuals for the second and third grades are of only slightly less importance than the manual for the first grade. The reasons for including the items given in the scale for these manuals are about the same as the reasons for including the items in the scale for the first-grade manual.

CRITERIA FOR JUDGING THE VOCABULARY OF THE PRIMER

1. Is the vocabulary sufficiently standardized?
2. Is there a low average of new words per lesson or page?
3. Is the number of new words introduced from lesson to lesson or from page to page fairly even?
4. Are first lessons largely or entirely confined to the reading vocabulary taught in the preprimer period?
5. Are there some lessons with few or no new words for the purpose of giving the child confidence in his progress toward independence in reading?
6. Is there ample word repetition?
7. Is there a low percentage of words occurring less than five times?

Item 1 of the criteria for judging the vocabulary of the primer can be checked by any or all of the widely used word lists, such as the Gates list[1] or the Thorndike list.[2] This criterion does not imply that the book must be slavishly restricted to such standard vocabularies, but it does mean that the vocabulary should be included within these lists to the extent that a child may be able to read other primers after completing the basic textbook. The other six items may be determined by statistical study of the primer being examined. Items 1 and 2 are standards well met by almost all modern primers. The remaining five items are met in varying degrees, some primers meeting one criterion; some, another; but few or none, all the standards. In every case, however, there is no intent that these standards shall be met so rigidly as to make the primer a mere mechanical device.

CRITERIA FOR JUDGING PRIMER CONTENT

1. Are stories fresh and interesting to first-grade children?
2. Do stories deal with the kind of characters that are interesting and within the children's experience?
3. Are realistic stories within the experience of the children?

[1] Arthur I. Gates, *A Reading Vocabulary for the Primary Grades*. New York: Teachers College, Columbia University, 1926.

[2] Edward L. Thorndike, *The Teacher's Word Book*. New York: Teachers College, Columbia University, 1921.

4. Do stories have sequential development? (Try reading pages from bottom to top to see if stories are made up of a series of more or less independent statements.)

5. Is word repetition natural and not mechanical?

6. Do stories have plot, that is, do they have suspense followed by climax or surprise?

7. Is there sufficient variety of types or kinds of stories or, at least, of story details to secure interest?

8. Is the book printed in clear type of proper size?

9. Are the lines of proper length?

10. Is the spacing between words, between lines, and between pictures and printing adequate?

11. Are the phrases unbroken?

12. Is paragraphing utilized?

13. What is the quality of the pictures?

14. Are the pictures properly distributed?

15. Is there a sufficient number of pictures?

16. Are pictures suitable to story, and do they possess appeal to children?

Items 1, 2, and 3 give bases for determining whether the content of the primer deals with stories, characters, and experiences with which the first-grade child is familiar. This essential is so generally recognized that virtually every primer of recent publication attempts with a considerable degree of success to meet these criteria. Items 4, 5, and 6 are more difficult to satisfy. In their efforts to meet vocabulary criteria some authors have so mechanized their primers that they have produced robot books with the life of the stories squeezed out. Other authors have retained the life and quality of their stories at the expense of vocabulary criteria with the result that learning difficulties are uneven and progress is slowed up. Of these two types of books, the latter is perhaps the less harmful since a keen desire to read and a zest for the work at hand is without doubt the first and basic essential in learning to read. However, by putting in sufficient time and by giving patient and tireless effort, talented authors can and should meet, to a satisfactory degree, both the criteria for vocabulary and those set up in Items 4, 5, and 6 in the scale for judging primer content. Almost any educator will recognize the validity of the remaining items. Those referring to size of type, spacing, phrasing, etc., refer to matters which have been determined by experimentation in the scientific laboratory.

CRITERIA FOR JUDGING THE FIRST-READER VOCABULARY

1. Is the vocabulary sufficiently standardized?
2. Is there a low average of new words per lesson or page?
3. Is the number of new words introduced from lesson to lesson or from page to page fairly even?
4. Are first lessons largely or entirely confined to the reading vocabulary taught in the primer?
5. Are there some lessons with few or no new words for the purpose of giving the child confidence in his progress toward independence in reading?
6. Is there ample word repetition?
7. Is there a low percentage of words occurring less than five times?

Concerning these criteria little additional comment is needed. Items 4 and 5 are those in which many first readers are weakest.

CRITERIA FOR JUDGING THE FIRST-READER CONTENT

1. Are stories fresh and interesting to first-grade children?
2. Do stories deal with the kind of characters that are interesting and within the children's experience?
3. Are realistic stories within the experience of the children?
4. Is word repetition natural and not mechanical?
5. Do stories have plot, that is, do they have suspense followed by climax or surprise?
6. Is there sufficient variety of types or kinds of stories or, at least, of story details to secure interest?
7. Are factual stories really true in detail?
8. How great is the quantity of reading material?
9. Is the book printed in clear type of proper size?
10. Are the lines of proper length?
11. Is the spacing between words, between lines, and between pictures and printing adequate?
12. Are the phrases unbroken?
13. Is paragraphing utilized?
14. What is the quality of the pictures?
15. Are the pictures properly distributed?
16. Is there a sufficient number of pictures?
17. Are pictures suitable to story, and do they possess appeal to children?

Item 1 mentions two matters for consideration. Freshness or newness of content may be determined by comparison of the content with that of other first readers. The interest for children may have been ascertained by the authors in a way that will be satisfactory to the person using the scale. If not, there are two alternatives: to use subjective judgment or to let a number of children read the book in an attempt to find out whether the stories interest them.

CRITERIA FOR JUDGING THE SECOND- OR THIRD-GRADE READER

1. Is the vocabulary well selected?
2. Is there sufficient variety of content, and is content properly balanced as to types?
3. Are almost all the stories ones which are not used in other readers?
4. Do the stories provide for training in several types of reading skills?
5. Are factual stories true in detail?
6. Have stories proved their appeal to the interests of children of this grade?
7. Have the stories genuine literary merit? (If selected, are they from authors of generally recognized literary ability, especially in children's literature; if adapted or written by unrecognized writers, do they have equal merit?)
8. How great is the quantity of reading matter?
9. Is the book printed in clear type of proper size?
10. Is the spacing between words, between lines, and between pictures and printing adequate?
11. What is the quality of the pictures?
12. Are the pictures properly distributed?
13. Is there a sufficient number of pictures?
14. Are pictures suitable to story, and do they possess appeal to children?

No comment need be made on Item 1 as it was covered in the discussion of vocabularies of primers and first readers. Second- and third-grade readers vary considerably with regard to the criterion covered by Item 2. There may be sufficient variety, but the content may be poorly balanced so that most of the selections are of one or two types. Does the examiner believe that 15–20 per cent of the content should be made up of well-selected poetry? If so, the use of this criterion will check the proportions and will also reveal other facts with regard to variety and balance. The use of Item 3 will guard against the duplication of material in supplementary readers. Item 4 is included because, research having shown that there are many kinds of reading skills, the logical thing to do is to begin in the primary grades consciously to train pupils in as large a number of skills as are suitable to their stage of progress. Item 5 is more important than would seem at first glance. The writer has examined readers in which factual stories contained gross errors because the authors themselves were not sufficiently informed on the topics about which they wrote. Recognized authors whose information is correct have written on all kinds of factual material, and their writings can be obtained and adapted, if necessary, to these grades.

Item 6 has already been discussed in connection with the scale for first-grade readers. Item 7 is explained in the parenthetical statement following the statement of the criterion. Item 8 is important, especially when the books are to be used in schools with meager amounts of supplementary reading. Extensive reading is an important factor in attaining reading expertness. The remaining items of the scale have been sufficiently explained in the discussion of the primer and first-reader criteria.

CRITERIA FOR JUDGING THE FOURTH-, FIFTH-, OR SIXTH-GRADE READER

1. Is it properly graded as to difficulty?
2. Is there sufficient variety of content, and is content properly balanced as to types?
3. Are almost all the stories ones which are not used in other readers?
4. Does it provide for training in a sufficient number of reading skills?
5. Are factual stories true in detail?
6. Have stories proved their appeal to the interests of children of this grade?
7. Have the stories genuine literary merit? (If selected, are they from authors of generally recognized literary ability, especially in children's literature; if adapted or written by unrecognized writers, do they have equal merit?)
8. How great is the quantity of reading matter?
9. Is the book printed in clear type of proper size?
10. Is the spacing between words, between lines, and between pictures and printing adequate?
11. What is the quality of the pictures?
12. Are the pictures properly distributed?
13. Is there a sufficient number of pictures?
14. Are pictures suitable to story, and do they possess appeal to children?

In this scale the wording of Item 1 differs from that of the items in the previous scale; this item needs no justification. While the other items are the same as the corresponding items in the preceding scale, they function equally well for the readers for the fourth, fifth, and sixth grades. The scale should, however, be applied to the readers for each grade separately.

CRITERIA FOR JUDGING THE SEVENTH- OR EIGHTH-GRADE READER

1. Is it properly graded as to difficulty?
2. Is there sufficient variety of content, and is content properly balanced as to types?
3. Does it include some standard literary classics for this grade?

4. Do stories provide for training in a large number of reading skills?
5. Are factual stories true in detail?
6. Have the authors proved by research that the stories appeal to children of this grade?
7. Have the stories genuine literary merit?
8. How great is the quantity of reading matter?
9. Is the type clear and not too small?
10. How does the book rank in quality, suitability, number, and distribution of pictures?

There is nothing in this scale that has not already been discussed. Some items of the previous scales which are not essential for these grades have been omitted. For example, in seventh- and eighth-grade readers, illustrations—though they are desirable and, when used, should meet criteria similar to those set up in the previous scales—are not so essential to the functioning of the textbooks as in books for earlier grades. This scale should be applied separately to readers for the seventh and eighth grades.

DIRECTIONS FOR USING THE SCALE

1. Score each book for every item on the appropriate scale.
2. Rate the book on each item separately.
3. Give a rating of one to a book that is as good as it is possible to be with respect to that item, two to a book which is very satisfactory but in which there might still be a little improvement, three to a book which is acceptable but not up to the standard of two, four to a book about which you are doubtful, and five to a book which you would object to using so far as that item is concerned. In other words, rate a book on a scale of five for each item on which it is to be scored.
4. Add up the scores on all items for each book and each series.
5. The book or series with the lowest total gets the highest rating.
6. In most cases in which the difference between the total scores of two complete series of books is less than ten, one cannot be sure that the difference would prove statistically significant. However, if a sufficient number of persons score the books, it will be possible to determine by statistical methods the significance of the difference between the average total scores for two sets or for two books.

A MERIT SYSTEM FOR ELEMENTARY SCHOOLS

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A merit system may properly be called a bank account for good deeds. When this plan is introduced into a school, it generally is a great success or a dismal failure; it seldom hits the midpoint. The very nature of a merit system causes this outcome since it must rest on a solid foundation of genuine school democracy. Democratic ideas do not succeed unless the majority of influential individuals want them to succeed. The first step, therefore, in installing a successful merit system is to "sell" the idea thoroughly to both teachers and pupils.

Many school men state that elementary-school pupils are not far enough advanced to make possible the operation of a successful merit system. The same criticism was made when merit systems were first introduced into junior high schools. This article describes a successful effort to extend this type of pupil participation into an elementary school.

The operation of the merit system of the Fremont School includes a council of five pupils, who officially approve or disapprove of merits won or lost. This approval is generally a mere formality. The council also hears appeals against the loss of merits and occasionally tries by the jury method flagrant violations of school rules, such as continued fighting, bullying, and stealing. The principal is present at all meetings of the council but plays a minor rôle in the activity unless he is appealed to for a decision or unless a need for harmony arises.

An important factor in the operation of the merit system is the fact that the pupils enforce the school rules. The duty of enforcing the rules has been intrusted to the Fremont Safety Committee, sponsored by the Automobile Club of Southern California. This committee is educated, so far as possible, to have a feeling of the obligations of service rather than a feeling of the necessity of arbi-

trary enforcement. School patrol units always run the danger of degenerating into tale-bearing organizations. When this danger is forestalled successfully, practically all the playground discipline can be handled by members of a safety committee. In Fremont School two teachers are on yard duty before school, during recess, and at the noon hour, but the Fremont Safety Committee has effectively eliminated much of the teachers' responsibility in the control of playground behavior.

The Fremont Safety Committee has fifteen members, a president, and a vice-president. All seventeen children are on duty unofficially at all times, but three members are officially on duty each day. These three give up their play activities to see that the play by the rest of the school is carried on in the proper manner. The law-enforcement work is supervised by the president three days a week and by the vice-president two days a week. These two positions are considered the most important offices in the school, and the candidates are carefully selected. The faculty must vote its approval before names of candidates may appear on the ballot. Popular but incapable candidates are tactfully discouraged from aspiring to these positions.

The Fremont Safety Committee election is preceded by one of the most interesting assembly periods of the school term. Original posters urging election of various candidates begin appearing a week before the election. Each candidate gives a speech in the assembly program, asking support for his candidacy. In the past, parents have attended this assembly in large numbers because of the interesting talks made by these elementary-school children. The election immediately follows the speeches, and, when the election smoke has blown over, the Safety Committee is organized for work. The Automobile Club of Southern California helps to make the gaining of these positions impressive by a formal presentation of arm bands and emblems of office. Incidentally, the Safety Committee is taken on a picnic near the end of each school term as a reward for good service.

Another important factor in the operation of the merit system is the careful execution of the necessary clerical work. This work has been simplified, but it still requires considerable time. The teacher

may keep these records in her room (no departmental system being used here), or she may delegate some reliable pupil to take care of the records. She must, at any rate, keep a close check on the work. A record is kept of merits earned through perfect attendance, banking,[1] office-holding, etc., and a record is kept of merits lost through tardiness, unexcused absences, fighting, and similar infractions of school rules. Most of the records are made in the classroom, but a memorandum slip is used by the principal for law infractions which come to his attention. The memorandum reads as follows:

MERITS LOST

Please deduct _____ merits from record of

_____ Room _____ Grade ____

Reason _____

_____

Principal or Teacher

These memoranda, when made in the office, are placed in the teacher's mailbox, and deduction is made by the teacher or her pupil clerk the next day. A similar form is used for recording "Merits Earned," and the same procedure is followed when a pupil renders meritorious service.

A record sheet, which is kept in a loose-leaf binder, is made out for each pupil, upon which is entered daily the record of merits lost and merits gained. At the end of each school month a balance is made between the merits earned and lost. A list of the names of the pupils enrolled and the balance record for each pupil are sent to the council monthly. The possession by any pupil of fewer than eighty or sixty merits is known as the danger point, and at this point the council takes action. Pupils who have 150 merits or more by the end of the term are given special privileges as rewards for their efforts.

One more development of the merit plan used in the Fremont School should be noted. A local citizen presented the school with a handsome silver plaque. Each term the graduating pupil who has

[1] In Fremont School the pupils make weekly bank deposits under the Bank of America plan, which is similar to the national thrift-education plan.

the highest average number of merits has the honor of having his name engraved upon this merit trophy, which remains the permanent property of the school. This honor, which has been accorded to but one pupil from the graduating sixth-grade class each term, has had a very beneficial effect. The merit trophy gives the pupils a definite goal for which to work.

The merit system used in Fremont School has been described briefly. Changes occur occasionally as new conditions arise. Local conditions will always affect somewhat any administrative plan, but the plan presented may serve as a model for other schools. The description of the system which is provided parents and pupils in mimeographed form follows.

MERIT SYSTEM

FREMONT SCHOOL, SAN LUIS OBISPO, CALIFORNIA

A pupil starts with one hundred merits each semester. His record is cumulative from term to term, and his final merit record is determined (when he graduates) by dividing his total number of merits by the number of terms he has attended Fremont School.

Pupils must have eighty merits or more to play on any school team, to take part in any school contest or assembly program, and to participate in any other extra-curriculum activities.

Pupils having less than sixty merits at any time during the school term will be recommended by the Student Council for faculty discipline. Such action should be severe, especially as the present plan offers many more opportunities for gaining than for losing merits.

The merit system is to include all pupils from third to sixth grade.

Teachers (or reliable room representatives) are to keep a monthly record of merits earned and merits lost (through tardiness, unexcused absences, etc.). However, these lost or earned merits do not become official except through action of the Student Council. This official action will, in general, be a mere formality except when a disagreement occurs.

The Student Council shall consist of the president of the Fremont Safety Committee, vice-president of the Safety Committee, representatives (one each) from VI A, VI B, and V A classes. All five of these officers are to be voted on by pupils in third to sixth grades in the general school election. Nominees for these five positions must be approved by the faculty.

The Student Council will meet once a week to consider all cases that fall under its jurisdiction. Any pupil may appeal to the Student Council against a loss of merits. Serious discipline cases will be handled by the trial-by-jury system by the Student Council.

MERITS EARNED

Reason for Award of Merits	Numbe Merits
Athletic award of official letter	10
President or vice-president of Safety Committee	15
Member of Student Council	10
Member of Safety Committee	10
Editor or business manager of *Fremont Live Wire*	10
Reporter for *Fremont Live Wire*	5
Editor or business manager of *Fremont Candle*	10
Staff member of *Fremont Candle*	5
Class president	5
President of club	5
Member of honor society	5
Banking (pupil banks each time during school month)	5 a month
Perfect attendance (each time pupil is not absent or tardy during school month)	5 a month
Attendance (each time room wins attendance banner)	5 a month
Special service (limit 30 each term)	5 an hour

MERITS LOST

Reason for Loss of Merits	Number of Merits
Stealing	30
Fighting on grounds	10
Destruction of property	10–20
Swearing or profanity	10
Wilful disrespect to teachers and other adults	10
Bullying of smaller children	5
Tardiness	5
Unexcused absence	5 an hour
Conduct unbecoming a Fremont pupil	5–15
Leaving school grounds during school hours without permission	10

Note.—Merits will be awarded only when duties in the positions are creditably performed.

HOW TO ESTIMATE THE QUOTIENT FIGURE IN LONG DIVISION

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There are two well-known ways of estimating the quotient figure in long division. These are known as the "apparent method" and the "increase-by-one method." In the first of these methods the first figure of the divisor is used as a guide figure from which the quotient is estimated. In the second method the first figure of the divisor is used as a guide if the digit in the units' place is 5 or less; when the units' figure is 6 or more, the guide figure is increased by one. If the divisor is 54, the guide figure for estimating the quotient by both methods is 5. If 57 is the divisor, the guide figure in the apparent method is 5, but in the increase-by-one method the guide figure is 6. Textbook writers show no unanimity of opinion as to which method is preferable. The degree of accuracy obtained from using each method is given in the following pages.

In this study only two-figure divisors and two-figure quotients are used. Divisors containing zeros are not used because dividing by such a number is equivalent to dividing by a one-figure divisor. Estimating the quotient for a divisor of 30 is identical with estimating it for a divisor of 3. Thus, there are eighty-one different two-figure divisors from 11 to 99, inclusive. Only two-figure divisors are considered because a divisor having more than two figures is treated as if it contained only two digits. If the quotient contains two figures, it is considered as two examples. In the example $21\overline{)224}^{10}$ two estimations are necessary. The pupil must determine, first, the number of 20's in 22 and, second, the number of 20's in 14. A previous study by Knight[1] did not take cognizance of a zero in the quotient. The

[1] F. B. Knight, "What Types of Analysis and Investigation May Be Used To Help Settle Questions Relative to the Better of Two Possible Methods?" *Second Yearbook of the National Council of Teachers of Mathematics*, pp. 41–48. New York: Teachers College, Columbia University, 1927.

writer cannot see that it requires less ability to determine the number of 21's in 14 than to find the number of 21's in 22. In both cases the result is quite evident, but each represents an actual division or estimation. Hence, there will be a total of 44,550 examples possible when each of the quotients and each of the divisors contain two figures.

ADVANTAGES AND DISADVANTAGES OF EACH METHOD

The greatest objection which can be advanced against the apparent method is its inaccuracy in giving the true quotient figure. The estimated quotient may be 5 removed from the true quotient. In the example $19\overline{)93}$ the apparent quotient is 9, but the true quotient is 4, or 5 less than the apparent quotient. If the increase-by-one method is used, the estimated quotient will never be more than 3 removed in the case of divisors having the units' digit from 1 to 5; in the case of divisors having the units' digit from 6 to 9, the true quotient is never more than 2 removed from the estimated quotient. As will be pointed out later, from the standpoint of the number of corrections of the estimated quotient, the increase-by-one method is superior to the apparent method. Although the increase-by-one method shows a slight advantage over the apparent method from the standpoint of the accuracy of the two methods, the advantage of the former method is lost because of the necessity of learning two different procedures for corrections.

When the apparent method is used, the pupil will have less difficulty in correcting an estimated quotient which is not the true quotient than when the increase-by-one method is used. In the former method, if the estimated figure is wrong, the true quotient is always found by decreasing the estimated quotient; in the increase-by-one method the correction may be made by either increasing or decreasing the estimated quotient. In this case there is no uniform procedure for correction. Furthermore, the pupil is able to detect an error in the quotient much more quickly in the apparent method than in the other method because of the size of the product of the divisor and the estimated quotient compared with the size of the partial dividend. In the apparent method, if the quotient figure is wrong, the product of the estimated figure and the divisor will always be greater than the partial dividend. If the increase-by-one method is used,

the product of the estimated figure and the divisor may be smaller than the partial dividend. In that case it is possible to subtract and carry on the process. The possibilities are shown in Examples A and B.

Example A

$$\begin{array}{r} 4 \\ 36\overline{)1385} \\ 144 \\ \hline \end{array}$$

Example B

$$\begin{array}{r} 311 \\ 36\overline{)1476} \\ 108 \\ \hline 39 \\ 36 \\ \hline 36 \end{array}$$

In Example A the apparent method is used, and the product of 4 and 36 is readily seen to be larger than the partial dividend. The pupil needs to compare only these two values to ascertain whether his quotient is correct. In Example B, if the increase-by-one method is used, the pupil is able to subtract, and consequently the error is not detected so readily as in the former case. Furthermore, in Example B the remainder must be compared with the divisor. These illustrations show that it is much easier to detect a wrongly estimated figure in the apparent method than in the increase-by-one method. If the apparent method were more accurate than it is, it most certainly would be the more desirable of the two forms of procedure for estimating the quotient figure.

The number of examples in which the apparent quotient is the true quotient is greater in Table I than in most similar studies because the pupil is instructed to consider an apparent quotient of 10 or more as an apparent quotient of 9. Since no quotient figure ever exceeds 9, the pupil tries 9 when the estimated quotient appears to be greater than 9. When this technique is used, the number of examples in which the true quotient is the same as the apparent quotient is greatly increased. As an illustration of this principle, consider the example $28\overline{)263}$. The pupil may estimate the number of 20's in 263 as 13. However, since 9 is the largest quotient possible, he tries 9 and finds that this is the correct figure. If this technique is not used, the true quotient figure is 4 removed from the estimated figure. In this study, for each of the 4,050 examples in which the

TABLE I

NUMBER OF EXAMPLES POSSIBLE FOR EACH TWO-FIGURE DIVISOR AND RELATIVE ACCURACY OF ESTIMATED QUOTIENT WHEN APPARENT METHOD OF ESTIMATING QUOTIENT IS USED

Divisor	Apparent Quotient Is True Quotient	True Quotient Is One Less	True Quotient Is Two Less	True Quotient Is Three Less	True Quotient Is Four Less	True Quotient Is Five Less	Number of Examples Possible*
11.....	65	45	0	0	0	0	110
12.....	42	66	12	0	0	0	120
13.....	35	56	38	1	0	0	130
14.....	32	48	48	12	0	0	140
15.....	30	45	45	30	0	0	150
16.....	30	42	42	40	6	0	160
17.....	30	40	42	41	17	0	170
18.....	30	40	40	40	30	0	180
19.....	30	40	40	40	35	5	190
21.....	165	45	0	0	0	0	210
22.....	130	90	0	0	0	0	220
23.....	100	125	5	0	0	0	230
24.....	84	132	24	0	0	0	240
25.....	75	125	50	0	0	0	250
26.....	70	112	76	2	0	0	260
27.....	66	104	89	11	0	0	270
28.....	64	96	96	24	0	0	280
29.....	62	93	93	42	0	0	290
31.....	265	45	0	0	0	0	310
32.....	230	90	0	0	0	0	320
33.....	195	135	0	0	0	0	330
34.....	162	176	2	0	0	0	340
35.....	140	195	15	0	0	0	350
36.....	126	198	36	0	0	0	360
37.....	117	191	62	0	0	0	370
38.....	110	180	90	0	0	0	380
39.....	105	168	114	3	0	0	390
41.....	365	45	0	0	0	0	410
42.....	330	90	0	0	0	0	420
43.....	295	135	0	0	0	0	430
44.....	260	180	0	0	0	0	440
45.....	225	225	0	0	0	0	450
46.....	200	250	10	0	0	0	460
47.....	182	261	27	0	0	0	470
48.....	168	264	48	0	0	0	480
49.....	159	257	74	0	0	0	490
51.....	465	45	0	0	0	0	510
52.....	430	90	0	0	0	0	520
53.....	395	135	0	0	0	0	530
54.....	360	180	0	0	0	0	540
55.....	325	225	0	0	0	0	550
56.....	290	270	0	0	0	0	560
57.....	261	303	6	0	0	0	570
58.....	240	320	20	0	0	0	580
59.....	224	327	39	0	0	0	590
61.....	565	45	0	0	0	0	610
62.....	530	90	0	0	0	0	620

* The totals in this column represent the number of examples between 10 and 20 times the divisor.

TABLE I—*Continued*

Divisor	Apparent Quotient Is True Quotient	True Quotient Is One Less	True Quotient Is Two Less	True Quotient Is Three Less	True Quotient Is Four Less	True Quotient Is Five Less	Number of Examples Possible
63.....	495	135	0	0	0	0	630
64.....	460	180	0	0	0	0	640
65.....	425	225	0	0	0	0	650
66.....	390	270	0	0	0	0	660
67.....	355	315	0	0	0	0	670
68.....	324	352	4	0	0	0	680
69.....	300	375	15	0	0	0	690
71.....	665	45	0	0	0	0	710
72.....	630	90	0	0	0	0	720
73.....	595	135	0	0	0	0	730
74.....	560	180	0	0	0	0	740
75.....	525	225	0	0	0	0	750
76.....	490	270	0	0	0	0	760
77.....	455	315	0	0	0	0	770
78.....	420	360	0	0	0	0	780
79.....	387	401	2	0	0	0	790
81.....	765	45	0	0	0	0	810
82.....	730	90	0	0	0	0	820
83.....	695	135	0	0	0	0	830
84.....	660	180	0	0	0	0	840
85.....	625	225	0	0	0	0	850
86.....	590	270	0	0	0	0	860
87.....	555	315	0	0	0	0	870
88.....	520	360	0	0	0	0	880
89.....	485	405	0	0	0	0	890
91.....	865	45	0	0	0	0	910
92.....	830	90	0	0	0	0	920
93.....	795	135	0	0	0	0	930
94.....	760	180	0	0	0	0	940
95.....	725	225	0	0	0	0	950
96.....	690	270	0	0	0	0	960
97.....	655	315	0	0	0	0	970
98.....	620	360	0	0	0	0	980
99.....	585	405	0	0	0	0	990
Total..	28,485	14,382	1,304	286	88	5	44,550

apparent quotient is 10 or more, the estimated quotient figure is always considered to be 9. A summary of the results secured with the apparent method is given in Table II.

The accuracy with which the quotient may be estimated is augmented by the increase-by-one method compared with the apparent method. It must be remembered that, when the divisor ends in 1, 2, 3, 4, or 5, the increase-by-one method is the same as the apparent method. When such divisors are used, the quotient is assumed to be 9 if the apparent quotient is 10 or more. The complete results ob-

tained by the use of the increase-by-one method are given in Table III. When divisors ending in 1–5, inclusive, are used, there are 23,850 possible examples; when divisors ending in 6–9, inclusive, are

TABLE II

SUMMARY OF RESULTS SECURED BY USE OF APPARENT METHOD OF ESTIMATING QUOTIENT

	Number of Possible Examples	Per Cent
Apparent quotient is true quotient	28,485	63.94
True quotient is one less than apparent quotient	14,382	32.28
True quotient is two less than apparent quotient	1,304	2.93
True quotient is three less than apparent quotient	286	0.64
True quotient is four less than apparent quotient	88	0.20
True quotient is five less than apparent quotient	5	0.01
Total	44,550	100.00

used, there are 20,700 possible examples. Table III indicates that in 78.23 per cent of the possible divisions the estimated quotient is the true quotient. In 12.91 per cent of the possible divisions the estimated quotient figure must be decreased by 1, 2, or 3, and in 8.86 per

TABLE III

SUMMARY OF RESULTS SECURED BY USE OF INCREASE-BY-ONE METHOD OF ESTIMATING QUOTIENT

	Number of Possible Examples	Per Cent
Apparent quotient is true quotient	34,850	78.23
True quotient is one less than apparent quotient	5,468	12.27
True quotient is two less than apparent quotient	239	0.54
True quotient is three less than apparent quotient	43	0.10
True quotient is one more than apparent quotient	3,890	8.73
True quotient is two more than apparent quotient	60	0.13
Total	44,550	100.00

cent of the cases the apparent quotient must be increased by either 1 or 2. In 99.23 per cent of all the possible examples the apparent quotient either is the true quotient or is but one removed from the true quotient. From the standpoint of the number of corrections

necessary to secure the true quotient figure, the increase-by-one method is superior to the apparent method. However, the undesirable feature of the former method is its lack of a uniform method for the correction of a wrong quotient figure.

INCREASING THE ACCURACY OF THE APPARENT METHOD

An inspection of Table I shows that, when the quotient is estimated for a divisor ending in 9, the apparent quotient is incorrect more often than it is correct. However, if divisors ending in 9 are increased by one to the next decade number, the number of estimated quotients which are the true quotients will be greatly increased. If

TABLE IV

SUMMARY OF RESULTS SECURED BY USE OF APPARENT METHOD OF ESTIMATING QUOTIENTS FOR ALL TWO-FIGURE DIVISORS ENDING IN 1–8 AND BY INCREASING BY 1 DIVISORS ENDING IN 9

	Number of Possible Examples	Per Cent
Apparent quotient is true quotient	31,061	69.72
True quotient is one less than apparent quotient	11,903	26.72
True quotient is two less than apparent quotient	927	2.08
True quotient is three less than apparent quotient	201	0.45
True quotient is four less than apparent quotient	53	0.12
True quotient is one more than apparent quotient	405	0.91
Total	44,550	100.00

the apparent method is used in the case of all divisors of two figures ending in 1–8, inclusive, and if divisors ending in 9 are increased by one to the next decade number, the results given in Table IV are obtained. This table shows that the true quotient is estimated correctly in 69.72 per cent of the total number of examples and that the true quotient is either the apparent quotient or one removed in 97.35 per cent of all possible cases. This result compares favorably with the results secured by the use of the increase-by-one method, the use of which gave the true quotient or a quotient only one removed from the true quotient in 99.23 per cent of the cases. The latter method is superior to the former in only 1.88 per cent of the total number of cases. Such a small difference is not sufficient to warrant a claim of superiority for either method. When ease of correction is

considered, the apparent method is preferable to the increase-by-one method. (It is to be remembered that the apparent method now under consideration is the method in which a divisor ending in 9 is increased by one to the next decade number.) In this method, if the apparent quotient is not the true quotient, the correction is made by decreasing the estimated figure. This uniformity in the method of correction avoids the confusion which is encountered in the use of the increase-by-one method.

In the use of this modified apparent method there are a few examples in which the correction must be made by increasing by one the estimated quotient; these occur when the divisor ending in 9 is made the next decade number. Since a correction of this type occurs in only 0.91 per cent of all the possible examples, the pupil will have little difficulty with this procedure. In many of the cases in which the estimated and true quotients are different, the true quotient is *evident from inspection.* In the example $39\overline{)395}$, as an illustration, the pupil notices at once that 39 will contain 39. If the divisor is considered 40, the true quotient is one more than the estimated quotient. A correction of this type is easily made. Furthermore, divisors ending in 9 may be considered special cases—a plan which adds to the ease in teaching the pupil to deal with a divisor of this type. Most teachers consider the zero types as special cases in each of the fundamental processes, since in this way more emphasis may be given to their treatment. The same procedure may be followed in the case of a two-figure divisor ending in 9. The teacher will then be able to point out the peculiarities in the correction of the estimated figure when it needs to be increased by one.

The writer recommends the use of the apparent method of estimating the quotient for all two-figure divisors ending in 1–8, inclusive. Divisors ending in 9 are increased by one to form the next decade number. If this method is used, there will be only 37 examples, or 0.083 per cent of the total number of examples, in which the true quotient is more than two removed from the estimated quotient, the divisors from 13 to 18 being excluded. When the latter divisors are used, the pupil must either know the pertinent multiplication facts or depend on trial and error.

Educational Writings

REVIEWS AND BOOK NOTES

The principal's rôle in supervision.—The outstanding development in the field of educational administration during the past decade has been the attainment of professional status by the elementary-school principal. Ten years ago the elementary-school principal was primarily a head teacher, utilizing his extra-teaching time in clerical and routine administrative duties and yielding responsibility for supervision of instruction to staff officers of the central administrative office. He made little contribution to current professional literature, and his status and functions received scant attention as subjects of professional research. Today, however, the elementary-school principal is recognized as the responsible head of his school and the most important factor in the superintendent's supervisory program. He is applying the methods and findings of research to the solution of his problems. Sensing his responsibilities of leadership, he is rapidly assuming the direction of professional growth of his staff and his logical position as educational leader of his school community. Foremost among the factors effecting this significant change of status has been the organization of elementary-school principals into an effectively functioning professional body under the National Education Association. The tenth yearbook[1] of this organization deals with the supervisory functions of the elementary-school principal.

The main purpose of the book, as stated by the editorial committee, is to serve as a handbook on supervision, "not only for principals now in service, but for the training of future school leaders" (p. 133). The contents are organized under nine chapters entitled "The Principalship Develops Supervisory Status," "Viewpoints on Supervision," "Supervisory Phases of Administration," "Influencing the Teacher," "Influencing the Pupil," "Vitalizing the Curriculum," "Applications of Measurement and Research," "Training the Principal through Supervision," and "Evaluating the Principal's Work." Each chapter, which corresponds to a "part" in conventional usage, consists of a number of articles classified under a general heading.

The book presents a creditable example of organization of materials. Problems such as appraisal and selection of manuscripts, apportioning a large topic

[1] *The Principal and Supervision.* Tenth Yearbook of the Department of Elementary School Principals. Washington: Department of Elementary School Principals of the National Education Association, 1931. Pp. 131–652. $2.00.

into divisions under which the articles selected could be adequately organized, and securing the effect of continuity and unity in the book as a whole were effectually solved by the editorial committee. Sixty-two of more than one hundred manuscripts submitted were selected for publication. A preliminary résumé of all the contributions facilitates the finding of articles of special interest to the individual reader. In addition, each main division of the book is preceded by an introduction indicating implications and problems to be considered in connection with the content and referring to related discussion in former yearbooks of the department. The annotated list of supplementary readings at the end of each chapter is helpful, though the reviewer wonders why more of the comprehensive articles on supervision with which professional magazines abound were not utilized in this connection.

While approximately two-thirds of the articles are written by elementary-school principals, the contributions of other professional workers—classroom teachers, psychologists, research specialists, staff members of professional schools, and superintendents—render the content comprehensive and balanced in point of view. Vague generalities are avoided; program material, when used, is definite and practical; and factual data are much in evidence. Stenographic reports of lessons, comprehensive check lists for supervisory activities, evaluation of demonstration-school procedures, utilization of teachers' difficulties as a basis of supervision, and development of criteria for measuring the principal's work illustrate how the principal is utilizing established principles and quantitative data in sensing and solving supervisory problems.

Teachers will find much of the material applicable to classroom situations. Instructors in professional schools may advantageously utilize the book in courses in administration and supervision. Elementary-school principals should regard it as a worthy unit in the noted series of yearbooks issued by their organization and a source of materials with which no principal can afford to dispense.

PAUL R. PIERCE

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The significance of certain factors in predicting teaching success.—A recent investigation[1] is the fifth to use the technique employed by Meriam in 1906 in an attempt to predict teaching success. The others are studies by Knight, Somers, Jones, and Whitney, and all use regression equations for prognostic purposes. The populations involved were composed of elementary-school teachers in every case, except that Knight included an additional small group of thirty-eight high-school teachers. Ullman's subjects were 213 Seniors enrolled in the course in directed observation and teaching in the University of Michigan. His calculations, after eliminations for various reasons, are based on a total of 116 cases.

Twelve variables were studied: (1) social intelligence; (2) general intelli-

[1] Roy Roland Ullman, *The Prognostic Value of Certain Factors Related to Teaching Success*. Ashland, Ohio: A. L. Garber Co., 1931. Pp. xvi+134.

gence; (3) knowledge of principles of teaching; (4) knowledge of the functions, purposes, and objectives of secondary education; (5) socio-economic status; (6) self-rating of teaching ability; (7) interest in teaching; (8) professional marks (marks received in courses in education); (9) marks in major subject; (10) academic marks; (11) teaching success in student teaching; and (12) teaching success under contract. The last-mentioned factor was measured by the Teacher-rating Card of the Michigan Education Association, two or more ratings being secured on each subject from superintendent, principal, or supervisor during the first semester of the first year of teaching experience.

The correspondence of rank order of the variables used in this study and in the previous studies, as related to teaching success is significant, particularly because both elementary-school and high-school teaching groups were used. The report says:

> Whitney found on the basis of the coefficient of multiple correlation that the relative weights of the independent variables which he studied were in order: student teaching, academic marks, professional marks, physique, secondary record, and intelligence. The results secured by the writer are in agreement except that socio-economic status ranks second and social intelligence is fifth in importance. These two factors were not studied by Whitney. The regression equations secured by Somers seem to place personality first in relative weight, with first-semester marks and intelligence also important factors. Jones found that for women the relative order of the most valuable factors was, average grades, sociability, intelligence, and outside activity; while for men the relative order was sociability, grades, and intelligence [p. 89].

Studies in this field of research should be continued with larger groups of subjects of both elementary-school and secondary-school teachers from all types of teacher-training schools. Using identical methods of investigation will make results more closely comparable than is possible in the studies made to date. The most serious limitation of all such attempts is the well-known subjectivity of the rating of the criterion, teaching success. It is believed that supervisory ratings on a nine-point scale of such vague "quality groups" as "vitality," "general personality," "dynamic personality," and the like are about as analytical and true as a single judgment on general merit of teaching. Perhaps a more valid and reliable measure of teaching efficiency can be made by a minutely complete analysis of all factors involved (personal and environmental) in the teaching situation in the case of any teacher in service. It is certain that no single item of information can be assumed to be symptomatic of the complex whole.

FREDERICK L. WHITNEY

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Comparative education without American bias.—Discussions of comparative education familiar to American readers are prone to display two outstanding weaknesses: (1) The author is too conscious of American education and therefore disparages or eulogizes other systems in comparison with the American

system. (2) The author attempts to explain each national system as a theoretically logical unit rather than a practical working evolution that for the time being happens to dominate a given national or sectional area. A book on comparative education written by an Indian scholar,[1] who studied in two Indian universities, as well as Cambridge, Göttingen, Berlin, the Sorbonne, Bologna, and El Azhar (Cairo), is excellent for the American reader because it avoids the two pitfalls suggested.

The author, Mr. Zia Uddin Ahmad, in his Introduction simply states: "I regret my inability to speak from personal observation on the educational system of the United States, where a variety of educational experiments are being carried on" (p. 8.) He then proceeds to analyze and to compare the systems of education of England, Germany, France, and India. He recognizes the fact that "every country has its own system of education, which, being the product of its past history and its present condition, cannot be mechanically transplanted to another country; at the same time there are certain aspects of educational methods in every country which offer us fruitful suggestions, which we shall be well advised to consider and adopt" (p. 1). This statement well indicates Mr. Ahmad's treatment of his subject.

Mr. Ahmad's chapter on England is unusually good because he describes the various types of English schools and school organization as they are, with panoramic effect, without any attempt to rationalize them into a logical "system." He also manages to condense into his seventy-five pages on England the essential features of English educational administration, methods, and current policies. He does the same thing, less interestingly but more critically, for Germany in eighty-four pages and for France more sketchily in forty-six. The latter part of his treatment of France deals with Italian modification of the French system of examinations and with education in the French colonies. The chapter on India gives an interesting historical sketch of Indian education and present organization, with many comments as to the inferiority of the present system and what seem to be eminently sane suggestions for improvement.

Although Mr. Ahmad is outspoken in expressing his feeling that present-day Indian education is a badly outmoded imitation of the English system and although he is entirely free in passing judgment on the other systems he treats, he does not pass judgment in such a way as to weaken the reader's confidence in his statement of facts. He has succeeded in stating his opinions frankly without leaving an impression of serious bias. His judgments of the different systems are interesting:

> The training of character is the principal feature of the English system. . . . . It is due to their superior character-training that the English have succeeded in driving away the French and other nations whenever and wherever they have come into conflict. . . . . But the English system is not well co-ordinated on account of the diversity of its origin and control. . . . .

[1] Zia Uddin Ahmad, *Systems of Education:* England, Germany, France and India. Calcutta, India: Longmans, Green & Co., 1929. Pp. xvi+302.

Germany is . . . . suffering from over-specialization, and persons having command of any subject as a whole are wanting in every walk of life. . . . . The strongest point of the German system of education is the intimate relation between the universities and industry. . . . .

The French are the most intelligent. They are quick to understand and grasp a subject, but too easy-going to take prompt action. Their system is very thorough, and they give preliminary scientific education even in professional and technical colleges. . . . .

The Indian system favors cramming and superficiality and is only intended to produce clerks [pp. 1–3].

These quotations, however, are from the Introduction; except in the chapter on India, the author does not intrude his views upon the reader. He is also singularly skilful in keeping his criticism separate from his descriptions of educational theories and conditions; he presents educational systems as they are instead of trying to rationalize them into something more logical than real.

HOLLAND HOLTON

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The activities curriculum in theory and practice.—A recent book[1] is one of about two dozen similar works which have emanated from the various progressive public and private schools in the United States and Europe. These volumes are full and informal journals of the activities of the children and contain also several chapters devoted to the underlying theory. The book under review is more didactic than other books of this type because it is intended as a textbook for prospective teachers in the primary grades.

The first part is a discussion of the theory which underlies the activities curriculum and of the nature of the formal studies in such a program. In the second part the author has isolated certain recurring learning or teaching techniques, such as "Cooking," "Assemblies," and "The Circle." The third part consists of twenty-six typical units of work that have been carried out in classrooms. As a matter of fact Parts II and III overlap considerably, the former including some units of work and the latter including some learning techniques.

The child is physically active, communicative, social, curious, manipulative, and creative. His purposes are those of doing rather than those of learning. Organized knowledge is used by the child only as it supplements experience. Therefore, the curriculum should be based on children's activities. Formal knowledge and skill should be learned but not until the pupils have reasons for their use. Such is a summary of the theory, but an examination of the activities and units shows that it is only partially applied in practice. When the program (p. 34) and the formal studies (pp. 60–83) are examined, it is found that time is definitely assigned to certain arbitrary essentials of a formal nature.

It develops, therefore, that the activities curriculum consists of activities plus subjects. Some of the subject matter grows out of the activities, some is

[1] Marion Paine Stevens, *The Activities Curriculum in the Primary Grades*. Boston: D. C. Heath & Co., 1931. Pp. x+440. $2.00.

deliberately woven into the units, and some is learned in isolation. The name assigned to this type of school program is derived from a part, and not from the whole, of the program—very much like a book of essays the title of which is taken from the principal essay.

The author does not hold that the activities shall be suggested exclusively by the children. In italics and capitals she says "No," at least for the major units. She maintains that, while working with little children, the teacher should do most of the suggesting. However, there remain many opportunities for the children to plan and initiate activities. Mrs. Stevens represents the view of the moderate progressives, which very likely has the largest number of adherents.

The units of work which compose the third part of the book are centers of interest which contain many activities and form the core of the curriculum. Each unit includes activities commonly found in several subjects. In the so-called "activities curriculum" one or two large units are in progress all the time and occupy a part of the school day, tying up more or less closely with the formal work. Again, this is only partially true of the actual units. Some are large, some are small, some are fragmentary, and some are not distinguishable from the phases of activity discussed in Part II.

It is unfortunate that the second and third parts should have been labeled separately "Typical Activities" and "Typical Units of Work," for the two overlap and are commonly used interchangeably. According to the author, activities are the component parts of units. As a matter of fact, some activities, like "Playing Store" (p. 125), are more appropriately units; and some units, like "A Doll Day" (p. 369), are more appropriately activities, as the author uses this term. In the latter case the author inadvertently calls the unit an "activity" although it is included under the classification of a unit of work. To one who is struggling to clarify his own conception of a unit of work, such a situation offers little encouragement. The confusion arises partly because the author was building a textbook in which her purpose was to present both a series of complete units and a series of basic, recurring phases of these units.

The units are clearly and graphically described. The book as a whole is singularly free from padding. It is full of practical suggestions. One finds it difficult to think of a phase of her subject which the author has failed to treat, always directly and succinctly. To the reviewer's knowledge, about half the units have never been treated before in any similar publication. Most of the units that are supposedly large centers of interest are too meagerly described. Compared with the few full accounts, the remaining units are mere fragments.

The reader of this book would do well to follow the author's advice to teachers, *begin with experience;* that is, begin reading the parts devoted to the units or activities. At a later time he should read the introductory portions devoted to the underlying theory. He will find that the basic principles go farther than the practice as described by the author. In fact, he may find a number of inconsistencies between theory and practice. However, the reader need not be too deeply disappointed because there always will be a gap between the two.

Besides, he will probably discover that the author is primarily a skilful practitioner whose lapses in theory are pardonable. One theoretical chapter, the first in Part III, on the building of a unit of work—sandwiched between the "activities" and "units" and spatially remote from the basic principles—will be found simple, direct, and exceedingly practical.

HENRY HARAP

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Another presentation of Thorndike's psychology.—Thorndike's system of psychology has by this time been restated in fully a dozen elementary textbooks. Under these circumstances there would hardly seem to be need for another book patterned after this model unless it should make important contributions either to the learner, in the form of greater clearness and interest or superior organization, or to the science as such, in the form of the intelligent reinterpretations and modifications which have become imperative by reason of the research of the last decade. The most recent addition to these books[1] which follow Thorndike makes neither of these contributions.

The titles in the Table of Contents look promising, but this preliminary favorable impression is borne out neither by the selection of subject matter nor by the method of its presentation. The book is divided into three parts which are approximately equal in length. The first of these parts has, ambitiously, been called "Living." Its ten chapters contain an account of human nature, largely in terms of Thorndike's instincts and with "especial emphasis on child and adolescent emotions" (p. vii). Part II, "Learning," repeats Thorndike's explanation of the learning process, utilizing his primary and subsidiary laws and much of his phraseology. Much too of his original material appears under the familiar chapter headings of "Improvement," "Permanence," "Transfer of Training," "Fatigue," and "Individual Differences." Included in this section also, for some obscure reason, are two curious chapters entitled "A Cross Section of Contemporary Theoretical Psychology" and "General Psychological Terms." The last of the three parts, "Testing," attempts to cover intelligence, school-achievement, and personality tests as well as their history, administration, something of their construction, their uses, and the statistics of measurement.

The authors in their Preface disclaim any credit for originality. Rather, they say, "the book is but a definite and sincere attempt to set forth in non-technical language what has been gleaned as truth" (p. vii) from various sources. Certainly they are wise to acknowledge their obligations to others for the substance of their book. In addition to the large amounts already mentioned as having been taken from Thorndike, one finds all the customary sections devoted to such topics as the James-Lange theory of emotion, the McDougall position with reference to instincts, the Pavlow experimentation on conditioning, the James

[1] Alene Ralston and Catharine J. Gage, *Present Day Psychology:* An Objective Study in Educational Psychology. Philadelphia: J. B. Lippincott Co., 1931. Pp. xiv+404.

chapter on habit, etc. Chapter xvii, "A Cross Section of Contemporary Theoretical Psychology," illustrates well both the extent and the nature of their borrowing. In order to provide a "well-rounded orientation," the authors in nine pages canvass the five principal schools of current psychology, supplying twenty-six footnote references. Twenty-two of these are to secondary sources, only two to the major writings of the exponents of these schools.

As to the authors' use of "non-technical language," the reader will probably wish that they had been less scrupulous in their effort at simplification. The looseness, ambiguity, and inconsistency which characterize the use of many of their terms might well have been avoided had they been willing to be somewhat more "technical." The term "bond" proves to be especially troublesome. It is first defined as follows: "Since the stimulus is definitely connected with the response, one thinks of the stimulus as being closely *bound to* the response. For this reason the whole reaction is called a stimulus-response *bond*. The force of the term 'bond' is not to be overlooked—that which binds or fastens" (p. 4). Having in this way apparently stressed the physiological or neural element of the connection, the authors speak of bonds as being "enacted" and of bonds "turning up" (p. 35). Later one reads that bonds "appear in behavior" and that a new bond "comes mechanically, without effort, without thought" (p. 40). Still later one learns that a child "will repeat those bonds which satisfy" (p. 115).

As further unhappy uses of "non-technical language," the following may be cited: One of the methods of "unconditioning" is that of "negative adaptation or social repression" (p. 43).

> There are two kinds of feelings, namely: agreeable or disagreeable; . . . . pain or pleasure [p. 52].
>
> Temperament may be thought of as the way in which the nerves connecting the stimulus and the response are strung: loosely . . . . tightly . . . . or just right. . . . . The more highly strung nervous system is more susceptible to foreign influences which cause individual reactions. The nervous mechanism of artists, dancers, singers, or players is wound more rigidly than that of common folk and secure in the knowledge that they possess that which "the crowd" does not—talent—theirs is the privilege to fly into tantrums and be called "temperamental" [p. 54].
>
> Psychosis means mental; neurosis means physical [p. 59].
>
> The function of the will is to cause or to inhibit action [p. 262].
>
> Percentile rank . . . . is comparable to the I.Q. although neither synonymous with nor equal to it [p. 360].

Brief descriptions of two chapters will serve to show how little concerned the authors seem to have been either with the difficulties of the learner or with a systematic organization of the content of the book. In chapter xviii, "General Psychological Terms," "the salient terms in general psychology are listed and defined as in a glossary. . . . . The reason for including this chapter is the fact that a student in psychology should have a passing acquaintance with each of the terms listed" (p. 248). Accordingly, after 247 pages, supposedly treating of psychology and hence employing the nomenclature of psychology, the reader

finds a series of over forty condensed definitions, beginning with "sensation" and concluding with "will." Chapter xxiv, "Statistical Terms," is provided for the student since "the simplest of these [terms] should be thoroughly understood, if educational measurement is to be correctly interpreted" (p. 357). In eighteen pages, therefore, the reader is given his "thorough understanding" of statistics—from scores through the various ages and quotients to correlation.

According to the authors, "particular care is exercised not to introduce any statement that has not been verified by authorities through experimentation" (p. vii). Had the authors chosen only such content as could have met this criterion, the volume would have been much smaller. For, while research in psychology has established much, there remain large areas of human experience which have hardly been touched by scientific workers. As a matter of fact, a conservative estimate of the amount of the book which has the stamp of experimental verification would be one-third. For example, most of the material on emotion and much of that on learning are still in the realm of inference and conjecture. The theory of short-circuiting, in accordance with which habits come to be directed through the lower centers, is still a theory although in the book it is accepted as proved fact. The hypothesis, here presented as established, that feeble-mindedness is inherited in accord with the Mendelian law is not only not established but is not now generally approved.

In passing final judgment on the book as a whole, one is impelled to believe that the authors, without being aware of the fact, adopted toward their content rather generally the attitude which they express specifically with regard to the James-Lange theory of emotion after a two-page discussion of this doctrine: "Whether or not it is the best explanation matters little here" (p. 61).

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Making history real.—The best way to promote international friendship is by developing within the present generation an appreciation of the interdependence of nations and an understanding of other peoples, which comes only through knowledge of those peoples. Parents and teachers who recognize the importance of fostering this sympathetic understanding in children will welcome an authentic history which appears in a form so attractive that boys and girls will read it of their own volition.

My Book of History[1] is, as its subtitle proclaims, "A Picturesque Tale of Progress." The three volumes, "Beginnings," "Conquests," and "New Nations," present a vivid picture of the story of man from the Early Stone Age through the Italian Renaissance. Although the books are designed primarily for the use of children in the intermediate grades, readers of all ages will be pleased with them. To begin with, the bindings are attractive enough to prompt an investi-

[1] Olive Beaupré Miller, assisted by Harry Neal Baum, *My Book of History:* Vol. I, Beginnings, pp. 512, 1929; Vol. II, Conquests, pp. 512, 1930; Vol. III, New Nations, pp. 512, 1931. Chicago: Bookhouse for Children.

gation of the content, and, when once a book is opened, the reader's attention is held. Some children will go through an entire volume studying only the pictures and explanatory notes beneath them. That sort of perusal alone is sufficient to make a lasting impression of the progress of mankind through the ages, for the illustrations, in color and in black and white, are profuse and accurate.

The text is clear, interesting, and authentic. It is enhanced by the inclusion of much of the contemporary literature of each period, such as myths, hero stories, and folk tales, which influenced and reflected the lives of the various peoples. The imagination and creative ability of the author have been used advantageously in weaving factual material into swiftly moving narrative so vivid that the reader shares the experiences of peoples of all times. Skill is also shown in the selection of facts and characters presented. A story covering such a great expanse of time is necessarily condensed for young readers and consequently must give space only to those persons and events having greatest influence on the world's history.

The first impression made by *My Book of History* is the unusual beauty of format. Further examination reveals the following outstanding points. (1) The books are the result of thorough study and research. (2) A summary is given of the things which each period or race contributed to the world. (3) The amount of space allotted to each period, race, or person depends on the importance of each in world-history. (4) Proper names, when they first appear in the text, are divided into syllables and the accent is marked in order to facilitate reading. (5) The crude beginnings and slow development of many things now in common use are explained both in pictures and text, for example, fire, tools, shelter, and means of communication. (6) The illustrations are taken from the best and most recent sources, from vase paintings, photographs of original rock carvings and paintings on cave walls, and from articles recently excavated. (7) The notes explaining some of these illustrations make clear to children the part that archaeologists and others of the present time play in making history known. (8) The illustrations are of value, not only for the clarity which they give to the text and the stories which they tell, but as authentic sources for correct costumes and customs of each period. They will prove very useful to teachers and students of art and dramatics. (9) Any illustration which is referred to in the text appears on the page where the reference is made. (10) A complete picture is given in these volumes which makes the world's history a reality and which will stimulate many readers to make more detailed study in the future.

My Book of History would be a valuable addition to every home and school library. To accompany each volume, an activity program[1] for teachers and pupils has been prepared which will guide teachers or parents in successful use of the books. It suggests modes of approach and presentation of the various units of study, suggests activities for home and school which vitalize that study, and provides lists of books for supplementary reading.

EVANGELINE COLBURN

[1] Mary G. Kelty, *Adventures in World History:* An Activity Program for Teachers and Pupils. Chicago: Bookhouse for Children, 1930. Pp. 96.

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